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ABSTRACT

The 1976 Master Plan for Ohio has been shaped by the new challenges and new conditions of declining growth and expansion, changing enrollment patterns, demands for higher education from groups not previously served, the need for and advent of new programs and innovative forms of instruction, and the changing requirements of society itself. The policies proposed are designed to meet these challenges. Specific objectives and recommendations are given concerning the areas of the changing setting for higher education; the resources available; independent nonprofit institutions; the elimination of barriers to access; developing quality; lifelong learning as a change and challenge; the future of graduate education; planning for health personnel education; and financing higher education. Areas of future concern are discussed briefly. (JMF)

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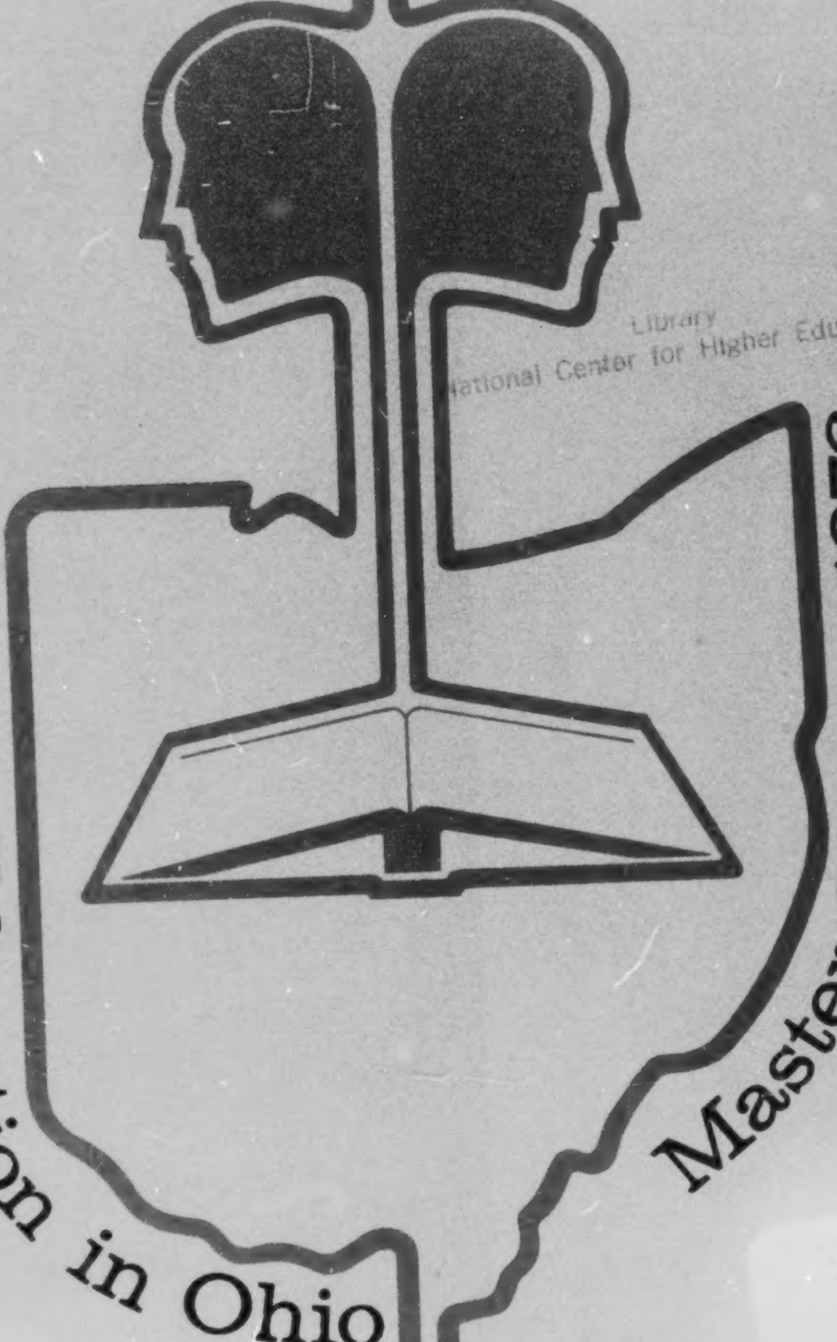

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Higher Education in Ohio

Master Plan: 1976

HE 008761

The Ohio Board of Regents

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Higher Education in Ohio Master Plan: 1976

Ohio Board of Regents
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Columbus, Ohio 43215

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Letter of Transmittal

TO: The Governor,
the General Assembly,
and the People of Ohio

This is the third Master Plan for Higher Education prepared by the Ohio Board of Regents. It identifies goals for our system of higher education, the means by which those goals can be achieved, and the resources which can be committed to the achievement process. It is the Board's recommendation to the people of Ohio, their government, and their universities and colleges.

This Plan is much more than an updating of past efforts. Previous master plans were prepared during a period of rising enrollments and unparalleled growth. The goals they set forth -- many of them achieved -- were in response to these conditions and concerned, in large part, with planning for growth. They were dictated and given validity by the period in which they were written and the circumstances which prevailed.

But now conditions have changed. Growth and expansion, though still part of the picture, are no longer the paramount factors to be considered in planning for higher education; they are being overshadowed by other, equally critical challenges to which Ohio's system must respond if it is to remain viable and effective. These include changing enrollment patterns, demands for higher education from groups not previously served, the need for and advent of new programs and innovative forms of instruction, and the changing requirements of society itself. The 1976 Master Plan has been shaped by these new challenges, and the policies it proposes are designed to meet them, now and in the future. In that sense, it differs from its predecessors in tone and content. But, like the previous plans, it is a response to the times and circumstances.

The central purpose of this new Master Plan is to make sure that our system of colleges and universities continues to respond effectively to the needs of Ohio and its citizens. But the planning process and the Master Plan itself are only the first steps; the biggest task lies ahead. If the Plan is to serve its purpose, it must be implemented. That will require a cooperative effort, involving a great many individuals, groups and institutions. It will also require a sustained emphasis on the careful management of resources - by individual institutions, the Board of Regents, and the state itself -- to assure the most effective use of those resources.

The Board of Regents is committed to this effort and to the coordinated planning and sound management that will be necessary to translate the pages of this Master Plan into continued progress for higher education in Ohio.

Respectfully submitted,

Marvin L. Warner
Chairman
Ohio Board of Regents
September 17, 1976

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Reader's Note:

For the convenience of readers, Chapters II - X are preceded by chapter summaries set in boldface type. In the full chapters, the specific recommendations and objectives of the Board of Regents also appear in boldface to facilitate reference.

CHAPTER I
Introduction

Higher education is concerned with human development.

Our colleges and universities are avenues of opportunity for men and women seeking to realize their full potential, both as individuals and as members of society. The campuses foster the intellectual qualities essential for growth and achievement, broaden human horizons by advancing knowledge, and perhaps more important, transmit the values and wisdom which are the foundation for our democratic society.

This responsibility for intellectual growth is central to the mission of higher education. Colleges and universities have many obligations, not the least of which is career preparation, but influencing all of their activities is the primary obligation to assure maximum human development for the benefit of individual students and the society in which they must function.

The pursuit of this objective has led higher education to assume many forms, reflecting the fact that human advancement is a complex process. Of these, none is more important than the broad, varied, and comprehensive body of studies known as liberal arts education.

It is through the liberal arts that higher education makes one of its most distinctive contributions to the enrichment of human life and the human condition. The purposes of liberal arts education go beyond career training to what has been called "education for preparation for life." Harvard President Derek Bok has noted that the liberal arts help students acquire intellectual skills and habits of thought "which are so fundamental that they will serve students well in almost any problem or career in which they happen to engage." And he adds that they also create a "web of knowledge that can illuminate experience and enlighten judgment throughout life."

The same point has been emphasized by Carnegie Corporation President Alan Pifer, who cautions against measuring the value of higher education principally in economic terms. He stresses that through the liberal arts, higher education makes an equal and perhaps greater contribution, helping individuals "develop intellectual abilities, humanistic understandings, and aesthetic sensitivities that will enable them to enjoy life more fully and contribute more effectively to the welfare of mankind."

The development of these qualities in individuals can be crucial for a democratic society where change -- often swift and explosive -- may be the only constant. And they are of immeasurable value to the individuals themselves, nourishing their literary and artistic interests, increasing their capacity for self analysis, and providing them with a greater sensitivity to ethical issues, social goals, and public purposes.

The liberal arts have a unique ability to foster these qualities, which are essential for individual growth and achievement. For that reason, they remain one of the paramount concerns of higher education.

In assuring this kind of intellectual growth, our colleges and universities play one of their most critical roles. But as centers of human development, they also make other important contributions, a primary one being the preparation of people for employment. There is great emphasis on this role today, but as Harlan Cleveland, former president of the University of Hawaii, has noted, "current enthusiasm for job-oriented education is not new; it is perhaps the oldest tradition in American higher education."

The emphasis placed on this role stems from the recognized advantages higher education can provide in the competition for jobs. The Board of Regents' "Issues" for December, 1974, observed that "College education on the average does make a difference" and cited impressive statistics to back up the statement. They show that college graduates have much lower rates of unemployment even during economic slumps, that they earn over a working lifetime considerably more than high school graduates, and that they return to government much more in taxes than high school graduates.

Considering these economic advantages, it is obvious why career preparation is viewed as one of the major objectives of higher education. It remains, as Carnegie Corporation President Alan Pifer points out, "the principal channeling device whereby millions of Americans each year find themselves a variety of professions and higher-level occupations."

In achieving the objective of career preparation, our colleges and universities also help realize the broader objective of fostering overall economic progress by providing the trained manpower needed in our increasingly sophisticated society. And they make other contributions to both the economy and society as a whole. Through their research programs (including both pure and applied research) and their public service activities, they generate the new knowledge essential for continued economic growth and bring to bear on crucial social problems the professional expertise needed to solve them.

Higher education also opens doors long closed to some groups of citizens. It helps bring people outside the mainstream of society (Blacks, the poor, other minorities) into the mainstream, facilitating their entry into the opportunity structure. One illustration of the advantages which higher education offers to these groups is found in some revealing unemployment figures. In March, 1968, blacks and other non-whites with four or more years of higher education had an unemployment rate of 1.4%, compared with a rate of 9.9% among members of the same groups with only one to three years of high school education. Five years later, in March 1973, the non-white college group had an unemployment rate of 2.3%, while those blacks and other non-whites with only high school experience had a rate of 11.6%. Equally important, the same figures showed the unemployment rate for black and other non-white college graduates to be only slightly higher than that for white college graduates and this equalizing effect of higher education appears to become more pronounced with time.

Clearly, higher education greatly increases the opportunities and options for blacks, women, and others seeking to realize their full potential. For many, this is one of its crucial objectives and with continued and special effort the role played by colleges and universities in opening doors promises to assume even greater importance in the years ahead.

Another objective, also certain to grow in significance in the future, is to help re-educate people to meet the shifting demands of the job market, which result from accelerating technological change. Increasingly, this trend will force people to change their occupations, perhaps more than once in their lifetime. Higher education must help prepare these people for new careers, a process that will involve an increasing commitment to adult or continuing education programs which offer the opportunity for lifelong learning.

It is clear that higher education plays a multitude of roles in meeting its responsibilities for human development. Our colleges and universities provide opportunities for individual growth, serve as training grounds for the educated work force society must have, make valuable contributions to economic progress and the resolution of social problems, and are the institutions most deeply concerned with sustaining our cultural heritage, improving the quality of life, and advancing the frontiers of knowledge. These obligations have given shape and direction to our system of higher education in the past and their continued importance is reflected in the goals for the future embodied in this Master Plan.

The Planning Process

Planning is crucial for a system of higher education as large as Ohio's. As the state entered the nation's bicentennial year, over 435,000 students were enrolled in Ohio colleges and universities, more than 340,000 of them in state institutions and another 95,000 in the independent colleges. The total cost of this system in terms of expenditures by the state and other government units, private donors, and students and their families can be conservatively estimated at a billion and a half dollars this year.

In recognition of the importance of planning, the General Assembly, in 1963, accepted the recommendations of Governor James A. Rhodes and established the Ohio Board of Regents, charging the Board to:

Make studies of state policy in the field of higher education and formulate a master plan for higher education for the state, considering the needs of the people, the needs of the state, and the role of individual public and private institutions within the state in fulfilling these needs (O.R.C. 3333.04[A]).

Since its inception, the Board of Regents has exercised this planning mandate and has also assumed other responsibilities consistent with its charge. Among these are the duties it exercises as the "State Postsecondary Education Planning Commission" (or 1202 Commission) under Section 1202 of the federal Higher Education Amendments of 1972. Designated as the state's 1202 Commission by the Governor, the Board of Regents now has planning obligations for the whole field of postsecondary education, which encompasses higher education and all other forms of post-high school education, including technical education, proprietary (for profit) schools, and occupational training for adults. The depth and breadth of this greatly expanded responsibility is reflected in the scope of the Master Plan detailed on the following pages. For purposes of clarity, the term "higher education" is used throughout the plan to designate both the colleges and universities with which it is primarily concerned and the other forms of postsecondary education.

By simplest definition, a master plan is a statement of goals and a description of the resources and actions necessary to achieve them. But behind the plan lies a complex planning process which mirrors the complexity of higher education itself.

The goals stated and elaborated upon in this Master Plan are the result of just such a process. They have evolved out of careful thought and study, and, in their final form, reflect informed opinion on higher education in Ohio and the directions it must take. In exercising prime responsibility for developing the plan, the Board of Regents has placed emphasis on open discussion and participation, recognizing that goals must reflect general agreement if they are to gain the support needed for their achievement. To this end, the Board sought and received valuable input from many sources, incorporating much of what it received into the final version of the plan. The diversity of these contributions is evident from the accompanying list and to these groups and their individual members, as well as to many others who reviewed chapters and made valuable contributions, the Board owes a special debt of gratitude.

The product of this comprehensive planning process is presented here – a new Master Plan for higher education in Ohio. The Board of Regents has a major responsibility to help implement this plan, and heavy obligations also rest with the colleges and universities. But the higher education community alone cannot translate the Master Plan into reality; there are many goals and recommendations which will require legislative or executive action and the commitment of state resources if they are to be implemented. Thus the final decision on the Master Plan and the overall priority assigned higher education rests in large measure with the citizens of Ohio and the government leaders they elect.

It is primarily to these citizens and their representatives that this Master Plan is addressed.

Master Plan Contributors

Presidents, Faculties and Administrative Staffs of State-Assisted Colleges and Universities
Advisory Committee on Service to Physically Handicapped Students
Advisory Committee on Student Financial Aid
Budgetary Modeling System Advisory Group
Chancellor's Advisory Committee on Instructional Development
Committee for Off Campus Instruction
Dayton-Miami Valley Consortium
Deans of Medical Schools
Dental Manpower Advisory Committee
Faculty Advisory Committee to the Chancellor
Graduate Program Policy Advisory Committee
Independent College Advisory Committee
Inter-University Council
Ohio Citizens' Task Force on Higher Education
Ohio College Association
Ohio Commission on Nursing
Ohio Council on Higher Continuing Education
Ohio Faculty Senate
Ohio Organization of Technical Colleges
Postsecondary Education (1202) Commission Advisory Committee
Regents' Advisory Committee on Graduate Studies
Student Advisory Committee to the Chancellor
The State Board of School and College Registration
Veterinary Medicine Advisory Committee

CHAPTER II
The Setting for Higher Education

Summary

Higher education is influenced by the economic and social trends confronting Ohio and the nation. As we move through a period of dramatic change, our colleges and universities must respond with new concepts and approaches to meet changing needs. Higher education cannot solve all of the problems connected with change but it is an integral part of the problem-solving process.

Economically, Ohio is still a strong and thriving state. But economic conditions are

changing -- new industries are supplanting more traditional ones as growth leaders -- and Ohio has been experiencing a steady relative slowdown in economic growth. To reverse this slowdown, Ohio must attract the newer technological and service industries which have the greatest potential for expansion.

Our colleges and universities can help assure this growth. Through research, they help generate the knowledge necessary for the development of today's newer, more sophisticated industries. By strengthening our intellectual resources, they can help attract these expanding industries to Ohio. And, as centers of human development, our campuses can provide the highly educated work force needed to run this rapidly evolving technological system.

The changing patterns of industrial growth are also radically altering career patterns, with many more people facing the need to change jobs, and even careers, more than once during their working lifetime. Higher education must prepare young people for this kind of career experience and assist older people who need to upgrade existing skills or acquire new skills and career training.

Given adequate support, our colleges and universities can meet these responsibilities, reinforcing Ohio's other efforts to deal with rapid social and economic change.

Changing demographic patterns in Ohio will also pose a major challenge for higher education in the years ahead. The state is experiencing a steady decline in population growth and its population is moving toward middle age. For our colleges and universities, this signals the beginning of a period marked by a substantial change in the mix of students and little or no growth in total numbers. It is imperative that our institutions recognize the tremendous significance of these trends and undertake the careful planning necessary to adjust to them.

One of the most important changes will be the enrollment of fewer traditional-age college students and an increasing number of older students. Enrollment projections indicate that these trends will prevail in the years ahead, with the enrollment of traditional-age students continuing to fall off substantially as the pool of high school graduates shrinks in size. This decline may be offset by the enrollment of larger numbers of full-time older students if the concept of lifelong learning continues to gain acceptability, and by the anticipated growth in the number of part-time students.

It is crucial to recognize that present enrollment projections indicate this changing pattern will affect institutions in different ways over the next decade. Ohio's residential universities are expected to experience a sharp decrease in full-time undergraduate enrollments, and even with a rise in the number of older students, an overall decline in enrollment. The urban universities will have fewer full-time undergraduates, but could gain enough part-time students to grow slightly. Branch campuses are expected to grow because of gains in the number of part-time students, and both community colleges and technical colleges will maintain steady growth rates for both part-time and full-time students.

These projections spell out higher education's evolving role. It must provide quality education for a still substantial body of traditional-age college students while at the same time meeting the needs of increasing numbers of students who want part-time education. This must be done within a limited or no-growth environment and will demand innovation and institutional flexibility on the part of our colleges and universities.

Chapter II

The goals and philosophy which shape Ohio's system of higher education do not exist in isolation. They are influenced by and must be, in part, a response to the economic and social trends confronting the state and the nation. Higher education must be viewed in relation to these factors and the demands they place upon Ohio's system of colleges and universities.

Ohio, like the nation and the world, is moving through a period of dramatic change. Traditional economic structures are being altered; demographic features are changing; major segments of society are undergoing a sometimes radical transformation. These evolutionary trends impact upon all of our social and economic institutions, mandating adaptation as the price for continued progress.

Higher education, being intricately linked with its setting, is one of the institutions most affected by these trends. The changing conditions which prevail in Ohio increase the obligations of our colleges and universities, demanding of them new concepts and approaches to meet changing needs. Adaptation to new responsibilities is crucial for higher education, both in terms of maintaining its leadership role and preserving its viability. Equally important, it is of vital concern to the state itself because of the major contributions higher education can make to resolving the complex issues facing Ohio.

It is unrealistic to say that higher education alone can solve our problems as we move into the last quarter of the 20th century. The problems associated with change must be addressed by all of the institutions of society, public and private. But our colleges and universities are an integral part of the problem-solving process and it makes sense for Ohio to use its system of higher education to help meet the major challenges of the present and future.

Economic Change

Economically, Ohio is strong and thriving. It is an industrial leader and a major producer of durable goods, headquarters for over sixty of the nation's largest companies, and one of the top ten agricultural states. It has a strong labor force of skilled and semi-skilled workers, high per-capita income, and a Gross State Product in excess of $60 billion. Always one of the nation's most prosperous states, Ohio continues to project an image of economic vigor.

But conditions are changing and many of the factors which have contributed to Ohio's prosperity are declining in significance. Short transportation routes to markets and proximity to natural resources, two of the state's strong points, are no longer as important as they once were. The manufacturing sector is being outstripped by new service and high-technology industries in terms of growth and employment opportunities, and competition is sharpening. As the factors which promote economic growth have changed, other sections of the country have had increased success in attracting new types of industry.

The result is that Ohio, while still a major industrial state, has been experiencing a steady relative slowdown in economic growth. The state's percentage of the Gross National Product has been decreasing since 1953, when it stood at 6.1 percent. Even in the area of manufacturing, which dominates the state economy, Ohio has been lagging; manufacturing output outside the state has grown at a faster rate than within the state.

A key factor in this slowdown in Ohio's heavy concentration on the manufacture of durable goods. This sector of economic activity is particularly sensitive to business cycles and is harder hit during a recession, since most purchases of durable goods can be put off until "better times." The condition of Ohio's manufacturing plants has also contributed to this problem. The state, having matured early in manufacturing, has a higher than average number of older facilities which, in a business slump, are usually the first to be closed and the last to be reopened.

Further complicating the picture is the fact that, while durable goods production remains a growth industry, increased automation has reduced the number of jobs it provides. Production is outstripping employment; from 1966 to 1972, for example, durable goods output increased 35 percent, while employment in that sector actually dropped 3.5 percent.

With manufacturing accounting for some 40 percent of Ohio's Gross State Product, changes in this sector will continue to impact heavily on the state. This makes it imperative that Ohio look in new directions to reverse the present slowdown and sustain its economic strength. There is a clear need to offset present trends in the manufacturing sector by promoting growth in other areas, particularly by attracting those newer technological and service industries which have the greatest potential for expansion.

Such change will require the marshalling of resources for a creative, coordinated effort to diversify and revitalize the state's economy. One of the most important of these resources is Ohio's system of higher education.

Our colleges and universities can contribute to this economic progress in a variety of ways. Through basic and applied research, they help generate the knowledge necessary for the development and growth of today's newer, more sophisticated industries. By sustaining a climate of academic quality, they can help attract these expanding industries to Ohio and assure them the intellectual resources they must have to function effectively. And, as centers of human development, our campuses can provide the highly educated work force which is needed to run this rapidly evolving technological system.

All of these functions are significant in fostering economic development. The last is perhaps especially critical because of the growing importance of higher education for both job seekers and employers. As industries continue to become more sophisticated, they require a steadily increasing supply of better educated workers. It is safe to assume that states which do the best job of increasing the educational level of their work force, including the level of higher education, will gain a distinct advantage in the competition for industrial growth.

It is true that some forecasts project an oversupply of college graduates in the future. But these predictions traditionally have been very unreliable. There is a high potential for error and for misinterpreting isolated examples of overproduction. Overall, current figures show that while 20 percent of the nation's jobs require a baccalaureate degree, only 15 percent of the U.S. labor force holds such a degree. Moreover, the U.S. Labor Department's Occupational Outlook Handbook for 1974-75 states, as such thoughtful reports consistently have stated, that "the number of professional and technical jobs, those that usually require a college degree (at least at the associate degree level), will continue to grow faster than jobs in other occupational groups."

Higher education's ability to provide a well educated work force is especially important in Ohio because the state has been experiencing an out-migration of people. Ohio went from a net in-migration of nearly 400,000 people during the 1950s to a net out-migration of 130,000 people during the 1960s. The trend accelerated in the 1970s; by 1975, the state had lost 276,000 people. This poses a serious problem because most out-migration occurs for employment reasons and is more common among those with higher levels of educational attainment. Thus, Ohio is likely to be losing the very people most needed by today's sophisticated growth industries. Clearly, our colleges and universities have a major role to play in replacing the educated talent being lost through out-migration so that Ohio is assured the human resources necessary to attract new industries.

The changing patterns of industrial growth also pose another challenge for higher education. Today, our rapidly developing technology constantly demands new and greater skills, and relies importantly upon the higher education systems which can provide them. A sizable number of today's skilled jobs did not exist twenty years ago. Projections indicate that within forty years many jobs unimagined today will be prominent and many of the human activities now regarded as work will be assumed by technological devices. Obviously, this trend will radically alter career patterns, with more and more people required to change jobs, and even careers, more than once during their working lifetime. Responsibility will fall, to a great extent, on higher education to prepare young people for this kind of career experience and to assist older people who are faced with the need to upgrade existing skills or acquire new skills and career training.

Closely allied with this trend is a social change which involves the re-entry into the labor market of sizable numbers of people, including housewives, retirees, and persons returning from military service. Increasingly, these people are turning to higher education for assistance in resuming their careers. Higher education must also meet their needs with programs of adult or continuing education that will facilitate their movement into the job market. Other programs of continuing education can be equally important for young people who find themselves handicapped in the competition for jobs because of an inadequate level of educational achievement.

These needs together require a form of education characterized in this Plan as lifelong learning. This evolving new responsibility is discussed in greater detail in Chapter VII; suffice it to say here that it involves providing intensive educational services throughout individual citizens' lives and will be one of the major thrusts of Ohio's system of higher education in the challenging years which lie ahead.

It is clear that higher education can be a vital force for progress, reinforcing Ohio's other efforts to deal with rapid social and economic change. Shaped in part by this change, our colleges and universities can also help shape it, contributing resources which will assist the state immeasurably as it seeks to adjust to new conditions and resolve new problems. Given adequate support, our system of higher education can meet the responsibilities thrust upon it by an evolving society, becoming what the Citizens' Task Force on Higher Education described as "the cutting edge transforming societal problems into opportunities."

Demographic Change

As higher education adjusts to a changing economic and social setting, it must also deal with changing demographic patterns within Ohio. These are equally significant in terms of their impact on Ohio's colleges and universities, influencing both enrollment figures and the types of services demanded of our institutions.

One such change involves a steady decline in Ohio's rate of population growth. While this is part of a national trend, the decline in Ohio is very pronounced; in fact, only five states have had lower rates of population growth during this decade. One reason for this is the out-migration noted earlier, which included relatively high out-migration of youths 10 through 25. Another reason is that Ohio has returned in the mid-70s to the birth rate that existed prior to the large increases of the post-World War II period.

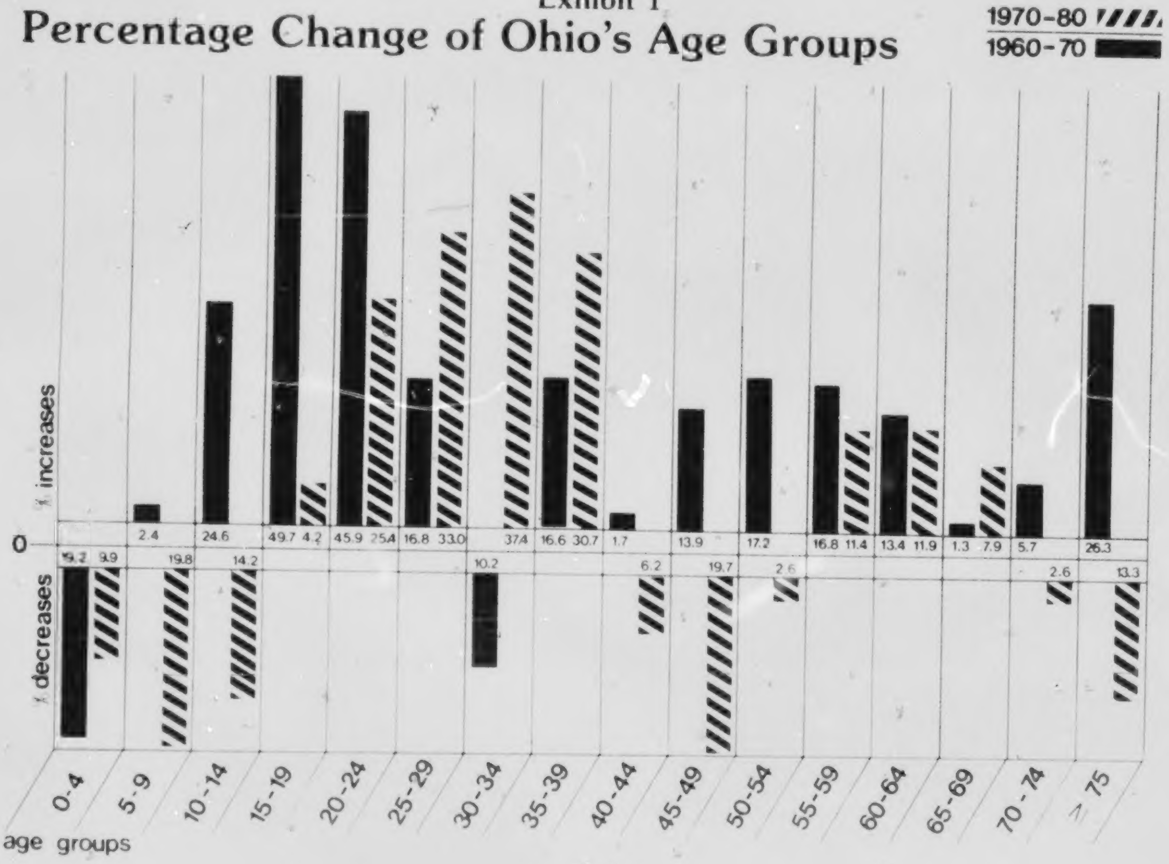
Ohio's rate of population growth fell below the national growth rate during the 1960s; in that decade the state's population grew by 9.7 percent while the nation's increased by 13.3 percent. At present, Ohio is even farther behind, with a growth rate of only one percent during the past five years, compared with a national growth rate of 5.1 percent.

Associated with this growth pattern is another demographic change, which is the movement of the state's population toward middle age. In the 1960s, age group 10-24 had the largest growth rate, with age group 15-24 rising more than 45 percent. But in the 1970s, as shown in Exhibit 1, the highest growth rate will be among those 25-39 years of age, and further projections show Ohio's population becoming increasingly middle-aged in the years ahead. These changes, both in the rate of population growth and the average age of the population, will have a major effect on higher education.

One significant result will be the enrollment of fewer traditional-age college students and of an

Exhibit 1

Percentage Change of Ohio's Age Groups



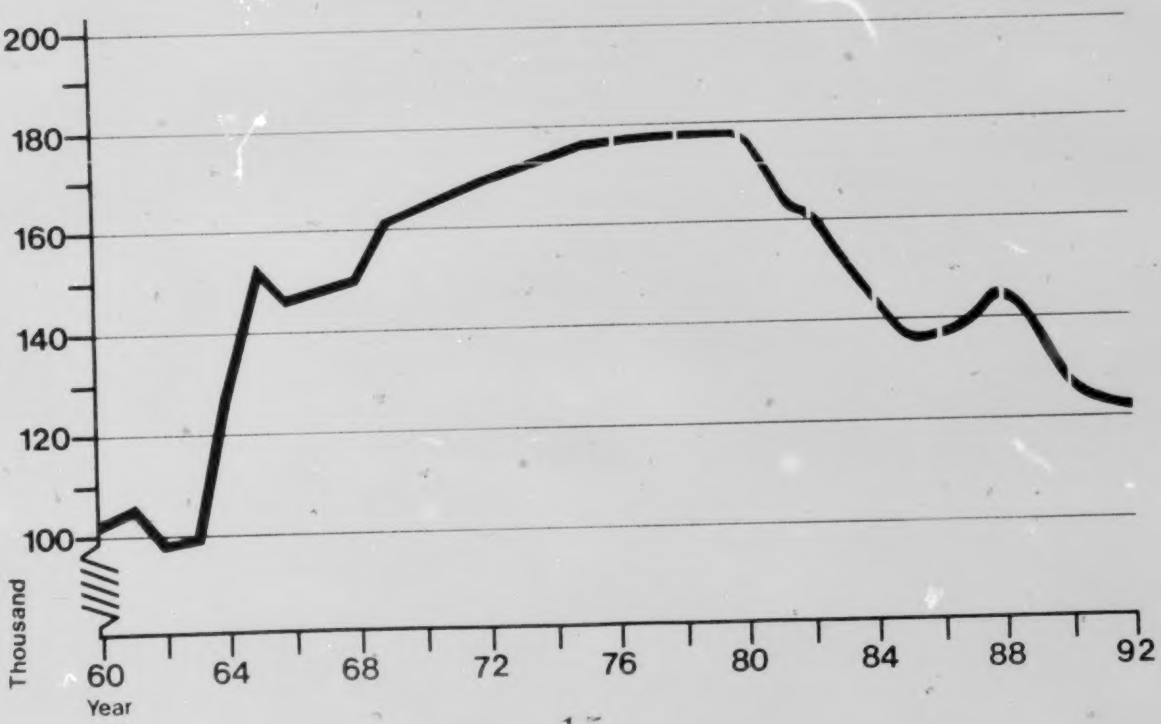
increasing number of older students. This is a pivotal fact around which future changes in higher educational service and institutional redirection must center. The urgency of our careful attention to this change cannot be overstated. This trend is already evident. The percentage of Ohio's 18 through 21-year-olds enrolled in state colleges and universities declined from 1971 through 1974, and even with the unusually high enrollment increases of 1975, now stands about equal to the 1971 enrollment figure. The same trend is also apparent for 22 to 24-year-old students. At the same time, the enrollment of students 25 or over has been increasing on all types of Ohio campuses, rising in absolute numbers and in percentages from 25 percent of total enrollment in 1971 to over one-third of the 1975 enrollment. This trend toward older college students is likely to become increasingly significant in the years ahead, since, as shown in Exhibit 2, the number of high-school graduates will level off in 1976 and begin to decline around 1980, reducing the input to our colleges and universities from this important source of student enrollments.

The decreasing enrollment of younger students can be largely offset, in terms of absolute numbers, by the growing enrollment of older students in Ohio's colleges and universities. Our higher education system is making some major changes to meet new kinds of student needs, and this includes a response to the desire of many older students for part-time education.

In 1971, 32 percent of all public enrollments were on a part-time basis. By 1974, this had risen to 38 percent, and while full-time enrollments actually declined three percent from 1971 to 1974, part-time enrollments rose 26 percent. The high enrollments of 1975 reversed the decline in full-time enrollments,

Exhibit 2

Ohio's High School Graduates



but the full-time student increase since 1971 has been only six percent, lagging far beind a 41 percent increase in part-time enrollments. This trend is expected to continue, since the older students who want part-time education are in the age categories that will show the greatest growth in the next five to ten years. As a result, major new responsibilities will be imposed on Ohio's colleges and universities, requiring continued adjustment to meet a changing demand for services.

Enrollment Projections

The above noted trends are influencing higher education today and they will have even greater impact in the years ahead. Thus, it is important to translate them into enrollment projections, which are of critical importance to the planning efforts of our colleges and universities.

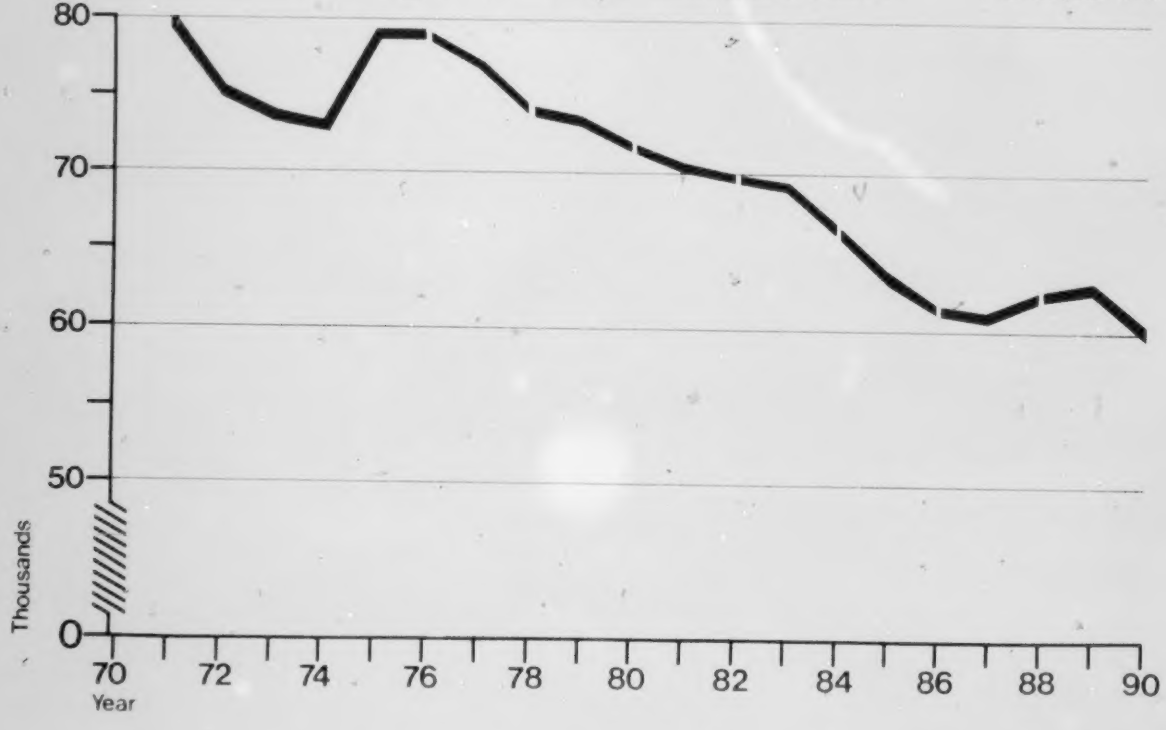
Projecting enrollments is a hazardous undertaking because of the infinite number of contingencies. The enrollment projections made in this section were developed by a Board of Regents' study and are today's best estimates. They will be subject to continual review, study and correction during the planning period of the next five years.

Due to the built-in uncertainty, several methods of projection have been employed concurrently. One technique projected the participation rate experiences of 1975 under the assumption that the latest year is the best single predictor of the future. A second technique, a demographic-based approach, used the historical college-going rate of 36 categories of students, separated into age groups, sex, and part-time, full-time status. This method made judgments regarding future rates and then projected future enrollment levels based upon projected Ohio population levels in each category. A third approach was based upon the recent college-going rates among Ohio's high school graduates by county, the size of future high school classes and the relationship of all other students to full-time freshmen.

The enrollment projections derived from each of these approaches indicate substantial changes in the mix of students over the next 15 years, and little or no growth in the total number. One of the

Exhibit 3

Young Full-Time Enrollments



largest and most significant changes will be the enrollment of decreasing numbers of young (18-19) full-time students, historically the majority age group on many campuses. Exhibit 3, based on the actual numbers of students in Ohio's elementary and secondary schools, illustrates for this group a projected decrease of about 25 percent between the present and 1990. This will have a major impact on those campuses and facilities oriented toward young full-time students.

Enrollment among all traditional-age full-time students (18-24) is projected to decrease, but this decrease could be partially offset by increasing numbers of full-time older students if the concept of lifelong learning continues to gain acceptability. Exhibit 4 illustrates the impact on total full-time enrollments of two possibilities: one assuming that 33,000 older students continue to enroll full-time as in 1975, and the other which assumes that increasing college-going rate trends of older full-time students persist until 1980 and then gradually stabilize. Even in the second instance, the overall total of full-time enrollments will begin to decline about 1982. It should be noted, however, that public policy decisions can influence these projections and a number of such possibilities are explored in the Master Plan chapters on Access and Quality.

Because of the demographics of Ohio's population, part-time enrollments would continue to grow even if the college-going rates of older students stabilized at 1975 levels. If the trends of the last five years were to continue to 1980, part-time enrollments of 200,000 could result by 1985.

An overall view of the enrollment trends indicated by current projections is shown in Exhibit 5, which projects Ohio's public enrollment by age groups for both full and part-time students. This exhibit graphically illustrates the changing pattern of age-group enrollments that seems likely to characterize higher education in the years ahead. However, planning based on these projections must recognize that there is considerable uncertainty associated wth the enrollment of part-time and older students, since this will be strongly influenced by the degree to which society accepts the concepts of lifelong learning and mid-career education. Planners must also take into account

Exhibit 4

Total Full-Time Enrollments

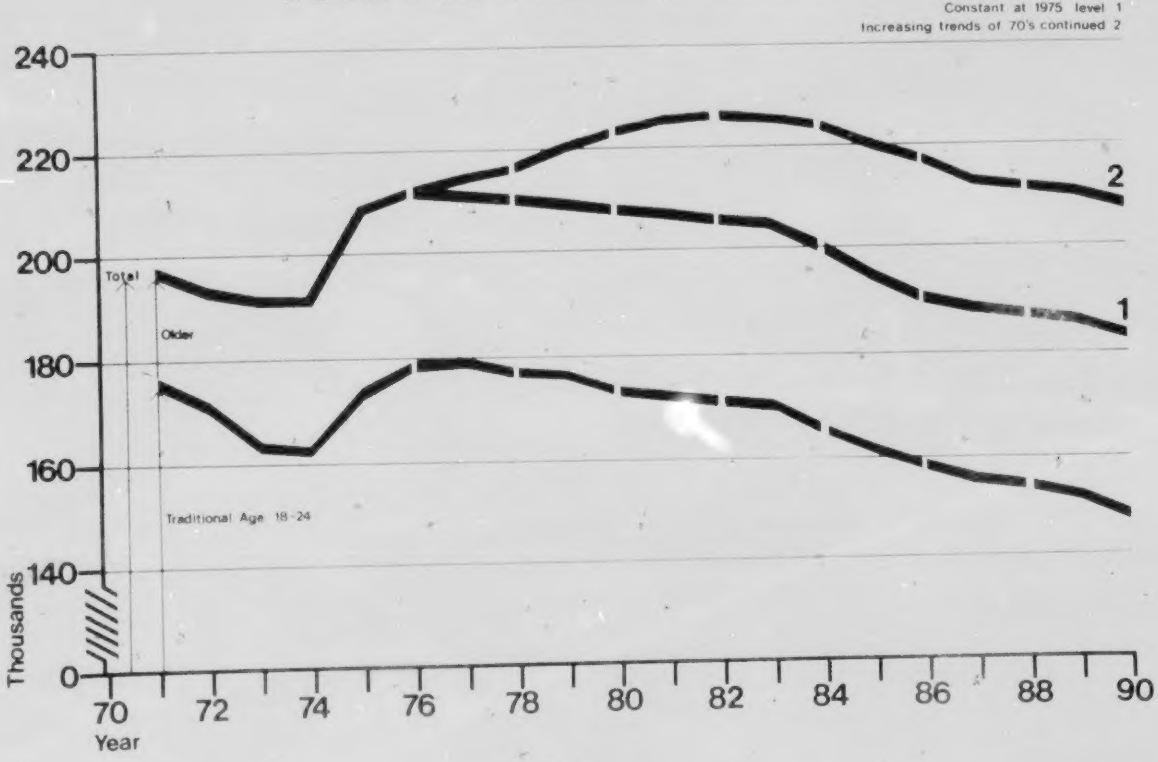
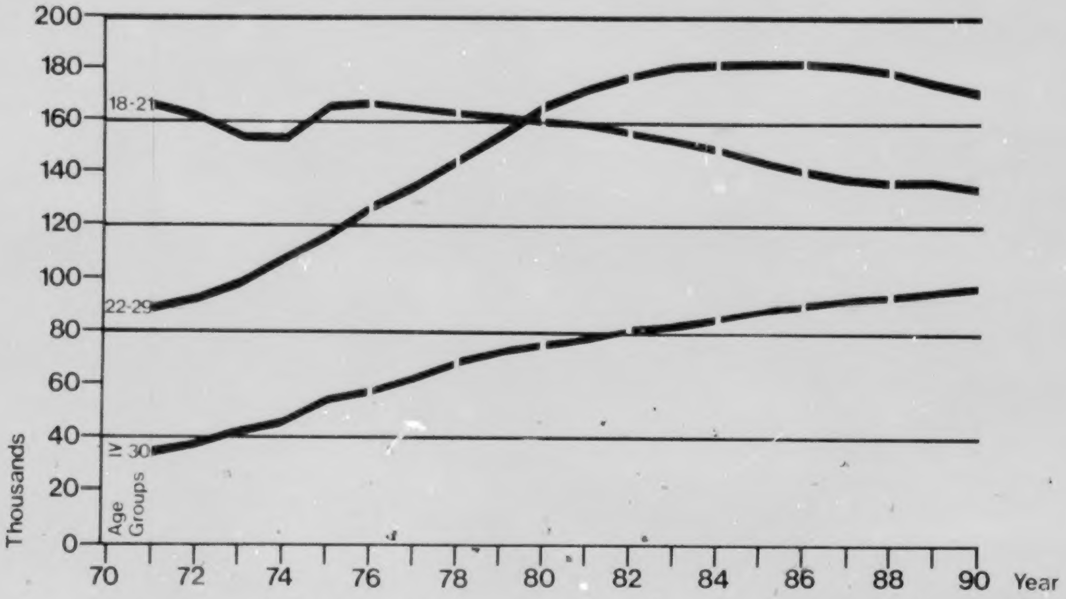


Exhibit 5

Ohio's Public Enrollment by Age Groups



the fact that part-time students require only a fraction of the teaching services needed by full-time students and that they generate only a fraction of the operating income produced by full-time enrollees.

In addition to the overall characteristics of enrollment change, projections point to significant differences in the rate of growth among various types of state institutions. These will be likely to shift the institutional mix of total enrollments as shown in Exhibit 6.

Exhibit 6

Total Enrollments - Institutional Mix

	1975	1980
Residential Universities	19%	17%
*Urban Universities	50%	46%
Branches	8%	8%
Community/General Colleges	16%	20%
Technical Colleges	7%	9%
All Public Institutions	100%	100%

*Includes Ohio State University, The University of Cincinnati and the Urban University Community and Technical Colleges at the University of Akron, and University of Cincinnati, the University of Toledo and Youngstown State University.

The changing enrollment patterns during the latter half of the 1970s are projected to affect institutions differently. This pattern of differential impact will continue throughout the decade of the eighties and represents the most important single advisory for individual institutions to be drawn from this review of enrollment prospects. As Exhibit 7 shows for the 1975-80 period, Ohio's five residential universities, historically drawing heavily from the high school graduate pool and from urban counties where the competition is now stronger, are projected in the aggregate to suffer a decline in enrollment. Their increase in part-time enrollees will not offset their decline in full-time undergraduates. The urban universities, on the other hand, while experiencing a similar drop in full-time undergraduates, could gain sufficient part-time students to grow slightly. Branch campuses, again due to part-time gains more than offsetting full-time losses, are expected to gain enrollments. The community and the general and technical colleges are expected to continue strong growth rates in both part-time and full-time students.

In his 1973 study, the late Ronald Thompson projected independent school enrollments to stabilize through 1981 and then decline about 17% by 1990. No more recent projection of independent college enrollments is available. The lack of a systematic data collection mechanism for students at Ohio's independent institutions prevented their inclusion in the more recent projections. A number of the independent schools have, however, expressed an interest in joining the Regents' enrollment projection efforts. It will be a matter of high priority to assist Ohio's independent institutions in sharing data on Fall student counts and characteristics as is done by state-assisted colleges and universities in the Student Inventory File of the Regents' Uniform Information System. Based on information now at hand, it is entirely likely that the unequal impact of enrollment change upon institutions of different types, described above for state colleges and universities, likewise will be experienced by and will create serious planning and developmental problems for Ohio's independent college sector during the planning period ahead.

Exhibit 7

Percentage Change in Enrollments, 1975-1980

	Total Full-Time	Total Part-Time	Total Enroll-ments
Residential Universities	-6%	21%	-2%
Urban Universities	-4%	22%	5%
Branch Campuses	-10%	24%	8%
Community/General Colleges	23%	49%	40%
Technical Colleges	25%	81%	49%

These enrollment projections delineate one aspect of the evolving role which higher education must play in the years ahead. Higher education must provide quality education for a still substantial body of traditional-age college students while at the same time adjusting its form and content to meet the needs of increasing numbers of students who want part-time education. This must be done within the projected setting of a limited or no-growth environment which, impacting with unequal force on different types of institutions, will demand innovation and institutional flexibility on the part of our colleges and universities. By meeting this challenge higher education will continue to make major contributions to the progress of Ohio's citizens and enhance its status as one of the state's most valuable resources.

CHAPTER III

Resources for Higher Education

Summary

Ohio committed itself to higher education early in its history, creating two institutions - Ohio University and Miami University - in the first six years of statehood. Today, the state system includes twelve universities, two independent medical colleges and over fifty two-year campuses. The state has met its goal of establishing a campus within commuting distance of every Ohio citizen and the Board of Regents sees no need for another state university or four-year college in Ohio, nor any need for additional two-year campuses.

Our system of higher education places strong emphasis on the concept of institutional autonomy for the colleges and universities. Primary authority for managing our institutions is vested in individual boards of trustees and this practice has been one of the strongest assets of the system. Institutional autonomy is a powerful guardian of academic freedom, with boards of trustees serving as a buffer against outside pressures, protecting their faculties and, through them, the entire educational process.

Ohio's state colleges and universities are resources for all of our citizens. The twelve universities offer unique blends of programming at the baccalaureate and graduate levels, function as important research centers, and make major public service contributions.

Five of these institutions are urban universities; this category includes the University of Akron, Cleveland State University, the University of Toledo, Wright State University, and Youngstown State University. These urban campuses serve students from throughout Ohio and the nation, but are distinguished by the large number of commuter students, including part-

time enrollees, they attract from their immediate communities and regions.

Five of the universities are residential campuses: Bowling Green State University, Central State University, Kent State University, Miami University, and Ohio University. The residential institutions draw their students for the most part from across the state and nation rather than from the local community or region. These students are mostly of traditional college age and enrolled full-time.

Ohio's newest state university is the former municipal University of Cincinnati. Located on five campuses, its 18 colleges and divisions offer a comprehensive range of undergraduate graduate, and professional programs. The University of Cincinnati is committed equally to metropolitan affairs, research, and scholarship.

Ohio State University is our major research university in terms of program and mission. Because of the depth of its programming, plus its national reputation for research, public service, and the generation of knowledge, Ohio State is an important resource for the entire nation as well as the state.

Further strengthening higher education in Ohio is the state's system of two-year campuses, which includes community colleges, university branches, state general and technical colleges, technical colleges, and urban university community and technical colleges. A major element of this system is technical education, which serves the needs of thousands of students seeking education for the growing number of semiprofessional jobs. Ohio's technical education programs have been marked by steadily rising enrollments and attract many students who may not have previously considered enrollment in college.

In addition to the state campuses, Ohio's system of postsecondary education also includes 61 independent, non-profit colleges and universities, over two hundred proprietary (for profit) schools, and a broad range of adult occupational education programs. These institutions and programs also play an important role in serving Ohio citizens.

As Ohio's system of higher education has grown more complex, increased emphasis has been placed on cooperative planning. Many cooperative ventures are already underway, involving both the state and independent sectors, which promise substantial benefits in terms of improved educational services. The Board of Regents is committed to stimulating this cooperation and will seek financial assistance from the state for this purpose.

Chapter III

Ohio's higher education resources offer depth and variety, thanks, in large part, to a building process that began almost as soon as the territory was opened for settlement.

In the beginning, there was American Western University, created through the leadership of Manasseh Cutler, one of the founders of the Ohio Company. The name American Western was short-lived; on February 18, 1804, less than a year after Ohio became a state, our first venture in higher education became what it still is today - Ohio University.

Then, in 1809, the Ohio legislature created a second institution, setting out a charter for Miami University. Several decades later, after Congressional passage of the Morrill Act establishing the land-grant college system, Ohio began development of what has become the largest single-campus university in the United States, Ohio State University. In the years that followed, other public colleges and universities were built throughout the state, and Ohio's comprehensive and geographically balanced system of higher education took shape.

This public development was paralleled by the establishment of a large number of private colleges and universities. Much of this private development took place in the latter half of the nineteenth century and first half of the twentieth century.

Citizen efforts also produced private campuses that became municipally supported universities in Cincinnati, Toledo, and Akron. The demand for teachers for Ohio's rapidly expanding elementary and secondary school system led to the development of new universities at Bowling Green and Kent early in the 20th century. And recognition of the needs of Black citizens for higher education in a far more segregated society than today led to establishment in 1951 of Central State University as an outgrowth of a college within Wilberforce University.

But impressive as this growth was, the progress of higher education in a single recent decade overshadows it. In 1963, Ohio created its first two-year campus, Cuyahoga Community College, and then went on to build, literally from the ground up, a whole system of two-year institutions. Today, that system consists of five community colleges, three state general and technical colleges, sixteen technical colleges, and twenty-three university branches on permanent campuses. The state also added to its system five new state universities (two of which had been municipal campuses) and established an affiliation with another. It went from supporting one medical college to supporting four - then added three new ones in the 1970s. In addition to this effort, Ohio has provided very sizable increases in state support for each of its existing public universities to finance their expansion. Overall, a total of $1.1 billion in capital support has been allocated for the state-assisted universities and the two-year college system since 1963.

Ohio has built well. The state has met its goal of establishing a campus within commuting distance of every Ohio citizen and this is an impressive achievement. **Except for bringing the University of Cincinnati into full state status, the Board sees no need for another state university or four-year college in Ohio, nor any need for additional two-year campuses.**

Institutional Autonomy A Basic Principle

From the very beginning of the long building process, Ohio's system of public higher education has stood firm on the basic principle of institutional autonomy for colleges and universities. The practice of vesting primary authority for management, planning and development in individual boards of trustees has been one of the strongest assets of our higher education system in the past and will continue to be equally important in the years ahead, as the system evolves to meet new changes and challenges.

Ohio believes in the principle of appropriate institutional autonomy; it works well and it is theoretically sound. Given this commitment, it may seem superfluous to reaffirm support for the principle at this point in time. But even something this widely accepted can be eroded and the threat is all the more real today, when there is a tendency on the part of some to urge greater central control to resolve many of society's problems, including those of education. Thus, it makes sense to reemphasize institutional autonomy as a basic, unchanging policy of higher education in Ohio.

The advantages of this policy are reflected in the vigor and diversity which characterize Ohio's higher education system. Guided by individual boards of trustees, who are close to their individual institutions, our public colleges and universities are better able to respond to the needs of their respective student bodies, service regions, and communities. They can develop personnel policies that best meet their individual responsibilities to ensure quality in both scholarship and teaching. And each institution, being free to manage its own resources, can effectively supervise their allocation both in areas of proven strength and areas of emerging importance.

Perhaps most significant, institutional autonomy is a powerful guardian of academic freedom, assuring faculty members - who are the ultimate strength of an institution - an unrestricted right to free inquiry and open discussion. By serving as a buffer against outside pressures - political, societal, economic - individual boards of trustees play a major role in protecting the integrity of their faculties and, through them, the entire educational process. It is this combination of autonomy and responsible academic freedom that helps ensure the quality of Ohio's system of higher education.

Special emphasis must be placed on the relationship between institutional autonomy and academic freedom as the issue of faculty collective bargaining becomes more pressing. If a bargaining approach is adopted, it is imperative that negotiations be carried out by the individual institutions and not at the state level. Statewide bargaining would bypass the boards of trustees and, in the process, weaken their ability to protect faculty members from outside intrusion. To avoid possible infringement on academic freedom, collective bargaining, if initiated, must be firmly established as an institutional responsibility.

Institutional autonomy has prevailed even as the growing complexity of the higher education system has led Ohio's colleges and universities to develop patterns of increased coordination. Beginning with informal programs and the formal, but voluntary efforts of the Inter-University Council, this trend culminated in legislation which created the Ohio Board of Regents in 1963. Establishment of the Board grew out of the recognition that a central agency, operating within clearly defined limits, can be both appropriate and useful. It can assist in defining statewide goals, coordinate approaches to the legislature, establish needed uniformity in essential reporting, and foster increased statewide cooperation among all colleges and universities. Equally important, the agency can also serve as another line of defense against unreasonable political intrusion on academic freedom.

The Ohio Board of Regents exercises these functions as an integral part of our system of higher education. But it now operates, and will continue to operate, with strict adherence to the principle of institutional autonomy, recognizing the primary role played by individual boards of trustees in the governance of our colleges and universities. The *independence* of these trustees remains of prime importance as *interdependence*, in the form of greater cooperation and coordination, increases in the years ahead.

The Campuses: Our Resources

The public colleges and universities strategically located across Ohio are resources not only for the thousands of students they serve, but for all of our citizens. Through this system of higher education, Ohio provides a full range of services, with educational opportunities at the associate and baccalaureate degree levels and in almost all graduate fields.

The twelve universities offer unique blends of programming at the baccalaureate and graduate levels, function as important research centers, and make major public service contributions to their communities, regions, and the entire state. All but two of these universities are also involved in associate degree programs on their own campuses or at a branch operation.

There are colleges of medicine or osteopathic medicine at four state-assisted universities - Ohio State University, Wright State University, the University of Cincinnati and Ohio University, plus the Northeastern Ohio Universities College of Medicine and the Medical College of Ohio at Toledo. In addition, state assistance is provided for the medical and dental colleges at an independent university, Case Western Reserve. There is also a state-assisted dental college and colleges of optometry and veterinary medicine. Another professional area, Law, is served by five colleges of law within the state university system.

Ohio's state universities fall into two basic categories - urban and residential. These categories share many common characteristics, but each also has its distinctive features.

Urban Campuses

There are five urban universities in Ohio. They include the University of Akron, Cleveland State University, the University of Toledo, Wright State University, and Youngstown State University.

In common with all state universities, these urban campuses serve students from throughout Ohio and the nation, but they are distinguished by the large numbers of commuter students that they attract from their immediate communities and regions. Many of these students are older and enrolled on a part-time basis. To meet their needs, the urban universities offer highly developed programs of continuing education and many schedule courses during evening hours. In addition to graduate and baccalaureate programming, three of the universities have special community and technical centers located on or near their campuses.

The urban universities have strong ties with their communities. At the graduate level, their programs tend to be more practice-oriented and are often directly related to community needs. This is also true of many of their research activities, which often address specific local or regional concerns. An example of the latter is the University of Akron's polymer science program developed in conjunction with the Akron rubber industry.

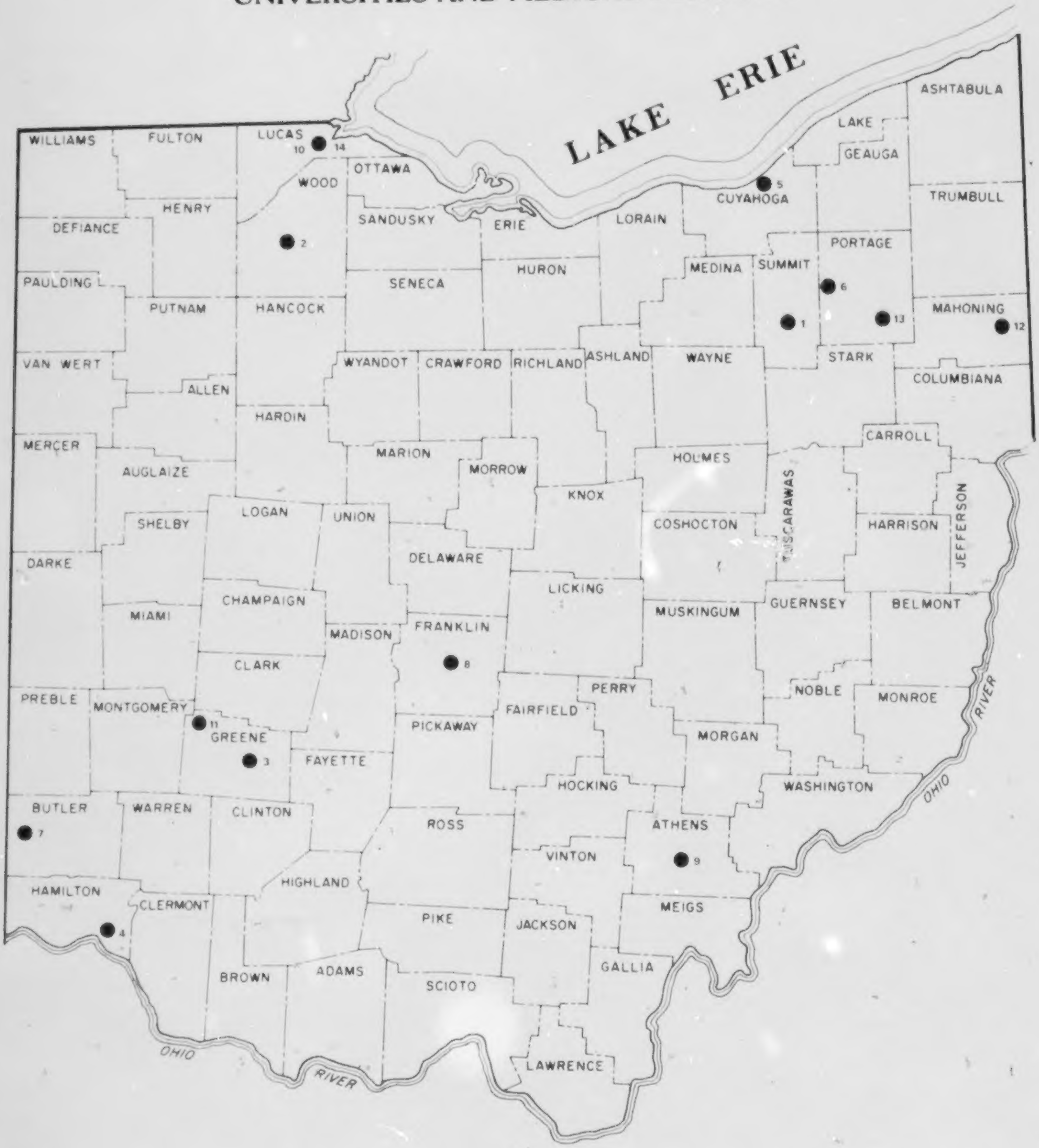
While several of these universities are among the older institutions in the Ohio system, their development as state campuses is one of the newer features of higher education and reflects a state response to the specialized needs of our urbanized society.

Residential Campuses

Ohio's five residential campuses include Bowling Green State University, Central State University, Kent State University, Miami University, and Ohio University.

The residential institutions serve students who are mostly of traditional college age and enrolled full-time. Large numbers of these students live on-campus and are drawn for the most part from across the state and nation rather than from the local community or region. Four of the five residential universities are located in smaller

STATE-ASSISTED UNIVERSITIES AND MEDICAL SCHOOLS


LAKE ERIE
WILLIAMS
FULTON
LUCAS
10
14
OTTAWA
WOOD
2
DEFIANCE
HENRY
SANDUSKY
ERIE
LORAIN
CUYAHOGA
5
LAKE
GEAUGA
ASHTABULA
TRUMBULL
PAULDING
PUTNAM
HANCOCK
SENECA
HURON
MEDINA
SUMMIT
PORTAGE
6
1
13
MAHONING
12
VAN WERT
ALLEN
WYANDOT
CRAWFORD
RICHLAND
ASHLAND
WAYNE
STARK
COLUMBIANA
HARDIN
MERCER
AUGLAIZE
MARION
MORROW
HOLMES
CARROLL
KNOX
TUSCARAWAS
SHELBY
LOGAN
UNION
COSHOCTON
HARRISON
JEFFERSON
DARKE
DELAWARE
LICKING
CHAMPAIGN
GUERNSEY
BELMONT
MIAMI
MUSKINGUM
MADISON
FRANKLIN
8
CLARK
PERRY
NOBLE
MONROE
PREBLE
MONTGOMERY
11
FAIRFIELD
PICKAWAY
GREENE
3
MORGAN
FAYETTE
HOCKING
WASHINGTON
BUTLER
7
WARREN
CLINTON
ROSS
ATHENS
9
VINTON
HAMILTON
CLERMONT
4
HIGHLAND
MEIGS
PIKE
JACKSON
BROWN
ADAMS
SCIOTO
GALLIA
LAWRENCE
OHIO RIVER
OHIO RIVER

State-Assisted Universities and Medical Schools

1. University of Akron
2. Bowling Green State University
3. Central State University
4. University of Cincinnati
5. Cleveland State University
6. Kent State University
7. Miami University
8. Ohio State University
9. Ohio University
10. University of Toledo
11. Wright State University
12. Youngstown State University
13. Northeastern Ohio Universities College of Medicine
14. Medical College of Ohio at Toledo

communities and, thus, have only a limited number of commuter students. Kent State University is the exception to this; originally a regional residential campus, it now plays a dual role, serving both residential students from all over the state and nation and many commuter students from the northeast Ohio area.

Programming at the residential universities is largely a daytime operation, which results from the full-time status of most of their students. Graduate programs tend to be more research than practice-oriented and are quite well developed, with research activity directed more to academic interests than to specific community issues.

All of the residential universities except Central State have systems of branch campuses which enable them to extend services throughout their respective regions.

Ohio's Newest State University

Prior to becoming a state institution on July 1, 1977, the University of Cincinnati was the second oldest and the second largest municipal university in the United States. Located on five campuses, its 18 colleges and divisions offer a comprehensive range of undergraduate, graduate, and professional programs to 38,000 students.

The university is committed equally to metropolitan affairs, research, and scholarship. It was a founder, in 1914, of the Association of Urban Universities and, in 1975, of the Committee for Urban Public Universities. The latter emphasizes a strong blend of research and academic program development, coupled with a commitment to public service. Cincinnati created the first cooperative educational program in 1906 (now serving over 700 firms with 1000 students in the metropolitan area alone), and today offers lifelong learning, community programs, and training in community services.

The distinguished research contributions of the University of Cincinnati faculty in areas as diverse as classics and medicine are exemplified by the ranking of the university as 59th of the top 100 for federally sponsored research.

Ohio State University

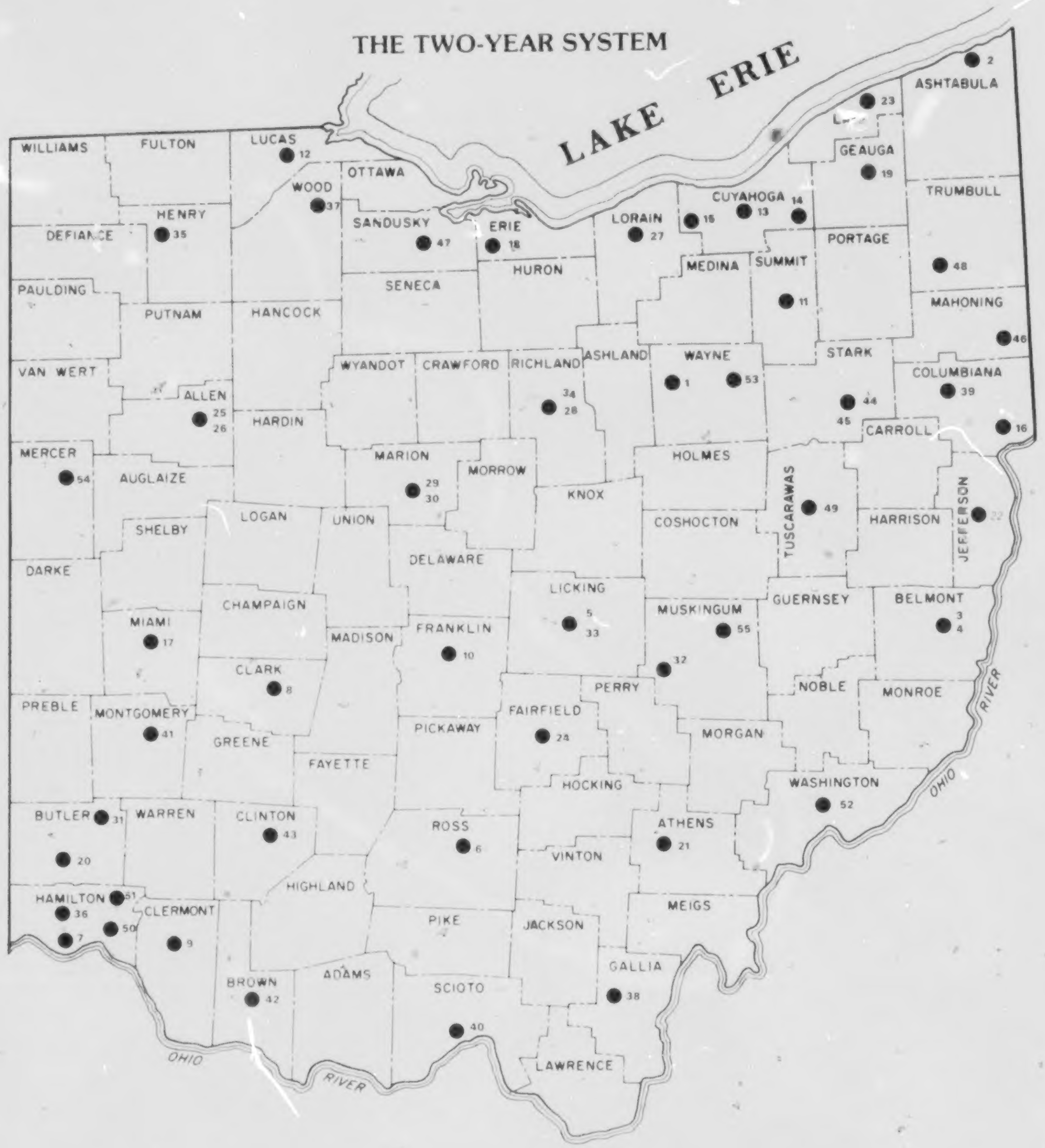
Ohio State University is our major research university in terms of program and mission, ranking 21st nationally in the area of federally sponsored research. On the Columbus campus, it serves the largest single-campus student body in the United States and it also provides education services for thousands of other students through a system of five branch campuses. Ohio State is Ohio's land-grant institution and the state-assisted university holding membership in the American Association of Universities. Because of these factors, plus its national reputation for research, public service, and the generation of knowledge, Ohio State is an important resource for the entire nation as well as the state.

The university has a broad complement of both graduate and undergraduate programs in traditional and innovative fields, serving students who come from all over the state and the world to attend. In addition to a full range of regular professional colleges, Ohio State has the only college of agriculture and associated agricultural experiment station in the state, as well as the only colleges of optometry and veterinary medicine.

Located in the middle of a major metropolitan area, Ohio State University is also involved in a large number of community service activities including programs in the arts and others responding to the growing need for lifelong learning.

The Two-Year System

The growth of Ohio's two-year campus system has been one of the most spectacular developments in higher education in the state. Over fifty of these institutions now contribute to the strength and diversity of our educational structure, offering baccalaureate-oriented programs, technical-degree programs, technical-occupational certificate programs, and non-credit continuing education. Along with the universities they also engage in research and public service activity.


THE TWO-YEAR SYSTEM
LAKE ERIE
ASHTABULA
2
LAKE
23
GEAUGA
19
TRUMBULL
48
LUCAS
12
WOOD
37
OTTAWA
SANDUSKY
47
ERIE
18
HURON
LORAIN
27
CUYAHOGA
15
13
14
MEDINA
SUMMIT
11
PORTAGE
MAHONING
46
WILLIAMS
FULTON
HENRY
35
DEFIANCE
PAULDING
PUTNAM
HANCOCK
SENECA
VAN WERT
ALLEN
25
26
HARDIN
WYANDOT
CRAWFORD
RICHLAND
34
28
ASHLAND
WAYNE
1
53
STARK
44
45
COLUMBIANA
39
16
CARROLL
MERCER
54
AUGLAIZE
MARION
29
30
MORROW
KNOX
HOLMES
TUSCARAWAS
49
HARRISON
JEFFERSON
22
SHELBY
LOGAN
UNION
DELAWARE
COSHOCTON
DARKE
CHAMPAIGN
LICKING
5
33
MUSKINGUM
55
GUERNSEY
BELMONT
3
4
MIAMI
17
MADISON
FRANKLIN
10
CLARK
8
32
PERRY
NOBLE
MONROE
PREBLE
MONTGOMERY
41
GREENE
FAYETTE
PICKAWAY
FAIRFIELD
24
MORGAN
HOCKING
WASHINGTON
52
OHIO RIVER
BUTLER
31
20
WARREN
CLINTON
43
ROSS
6
ATHENS
21
VINTON
HAMILTON
51
36
7
50
CLERMONT
9
HIGHLAND
PIKE
JACKSON
MEIGS
GALLIA
38
BROWN
42
ADAMS
SCIOTO
40
LAWRENCE
OHIO RIVER

Two-Year Campuses

1. Agricultural Technical Institute Ohio State University
2. Ashtabula Branch, Kent State University
3. Belmont Branch, Ohio University
4. Belmont Technical College
5. Central Ohio Technical College
6. Chillicothe Branch, Ohio University
7. Cincinnati Technical College
8. Clark Technical College
9. Clermont Branch, University of Cincinnati
10. Columbus Technical Institute
11. Community and Technical College University of Akron
12. Community and Technical College University of Toledo
13. Cuyahoga Community College Metropolitan Campus
14. Cuyahoga Community College Eastern Campus
15. Cuyahoga Community College Western Campus
16. East Liverpool Branch, Kent State University
17. Edison State General and Technical College
18. Firelands Branch, Bowling Green State University
19. Geauga Branch, Kent State University
20. Hamilton Branch, Miami University
21. Hocking Technical College
22. Jefferson County Technical Institute
23. Lakeland Community College
24. Lancaster Branch, Ohio University
25. Lima Branch, Ohio State University
26. Lima Technical College
27. Lorain County Community College
28. Mansfield Branch, Ohio State University
29. Marion Branch, Ohio State University
30. Marion Technical College
31. Middletown Branch, Miami University
32. Muskingum Area Technical College
33. Newark Branch, Ohio State University
34. North Central Technical College
35. Northwest Technical College
36. Ohio College of Applied Science of the University of Cincinnati
37. The Michael J. Owens Technical College
38. Rio Grande Community College
39. Salem Branch, Kent State University
40. Shawnee State General and Technical College
41. Sinclair Community College
42. Southern State General and Technical College, South Campus
43. Southern State General and Technical College, North Campus
44. Stark Branch, Kent State University
45. Stark Technical College
46. College of Applied Science and Technology, Youngstown State University
47. Terra Technical College
48. Trumbull Branch, Kent State University
49. Tuscarawas Branch, Kent State University
50. University College, University of Cincinnati
51. Raymond Walters Branch, University of Cincinnati
52. Washington Technical College
53. Wayne Branch, University of Akron
54. Western Ohio Branch, Wright State University
55. Zanesville Branch, Ohio University

Close relationships are maintained between the two-year colleges and their local communities. Laws relating to community and technical colleges require that they be established through local initiative and link these institutions to official districts from which all trustees must come. Local advisory committees are required for the development and continuation of technical-degree and other occupational programs. University branch campuses have also appointed local advisory committees to assist with community-campus interaction.

State coordination of the two-year system is exercised through the Board of Regents, which must approve the establishment of two-year colleges and which also has authority over the development of degree programs and the establishment of fee and tuition schedules. All of the two-year institutions except the university branches are governed by boards of trustees, with some or all of the trustees appointed by the Governor.

Ohio has five types of two-year campuses. They include the following:

Community Colleges

Community colleges provide a wide range of services, including baccalaureate-oriented general-studies programs, technical-education programs and special adult continuing-education courses. There are five community colleges in Ohio, four of them located in major metropolitan areas. Cuyahoga Community College, which serves the Cleveland area, is the third largest collegiate institution in the state.

These two-year colleges have a special relationship with their communities, each being funded in part by a local tax levy. This levy support helps the colleges keep their fees low and also provides money for capital construction. Generally, because of their low fees and locations, community colleges have experienced rapid enrollment growth and this growth is expected to continue in the future.

University Branches

A university branch consists of a permanent facility established and governed by the university board of trustees, with assistance from a local advisory committee. It offers two-year programs in general studies (including all courses offered to serve lower-division students), and adult or continuing education, plus in some instances technical education through the associate-degree level. In addition, branch campuses often serve as the location for off-campus upper-division and graduate programming offered by the universities.

Twenty-three university branches are now in operation throughout Ohio, seven sharing campuses with public technical colleges. Locations include metropolitan areas and many smaller rural communities. Over the past several years, the growth of the university branches has been sporadic.

Technical Colleges (Institutes)

The technical colleges in Ohio serve their communities with two-year technical-degree programs and, in many cases, shorter occupational programs for adults. Because of the rapidly escalating interest in technical education, the technical colleges have had the fastest growing enrollments in the state over the past two years.

There are sixteen technical colleges, plus the Agricultural Technical Institute at Wooster, which is a branch campus of Ohio State University. As such, the agricultural institute is not organized under the law relating to technical colleges although it is primarily a technical education institution.

State General and Technical Colleges

State general and technical colleges are the newest form of institution in the two-year system. There are three such campuses and their programming is similar to that of the community colleges. The general and technical institutions offer general studies, including baccalaureate-oriented programs, technical-education programs, and adult or continuing education. If, in the future, branch campuses and/or technical colleges seek to reorganize their structure, they are most likely to adopt the organizational form of the state general and technical colleges.

Urban University Community and Technical Colleges

An urban university community and technical college is a two-year institution set up as an integral part of an urban university to serve a primary mission in the area of technical education. There are four of these colleges in Ohio, three of them located on the main campuses of their parent universities. All are governed directly by the universities that developed them.

These community and technical colleges are major two-year educational resources for their communities, offering well developed and diverse programming for students.

Technical Education

As the above descriptions indicate, technical education is a major element in Ohio's two-year campus system. The rapid development of the system has been strongly stimulated by the growing demand for this type of education, which has paralleled the expansion of opportunities for workers trained for semiprofessional jobs.

This demand is reflected in steadily increasing enrollments. In the 1967-68 academic year, there were about 14,000 students enrolled in technical-education programs. Today, there are more than 66,000 persons enrolled in technical programs, with the 1975-76 academic year marked by a 28 percent increase in the enrollment of technical education students. A major attraction for these students has been the growing number of opportunities in technical education; Ohio's two-year campuses now offer over 100 programs leading to the associate degree.

This growth has been accompanied by a rising level of state support, another indication of the importance assigned to technical education. In the 1967-69 period, the state subsidy for technical education was $350 per full-time equivalent student.

By 1973-75, the subsidy was up to $1,134 and, during the 1975-77 period, it will average $1,467.

Wide variety characterizes the thousands of students being served by Ohio's technical-education facilities. Many are students who have enrolled directly from high school and, indeed, the system was originally designed for this category. But, in technical education as elsewhere, enrollment patterns are changing. Today, there are large numbers of part-time students, including adults, who are seeking skills to upgrade themselves or prepare for new careers. Overall, technical education draws from very diverse groups of people, attracting many students who may not have previously considered enrollment in college.

The main thrust of technical education programs is to train people for specific semiprofessional jobs. But strong emphasis is also placed on general education to assure that students gain a broad educational base. General education courses make up approximately 50 percent of the curriculum in two-year associate-degree technical programs.

Independent Higher Education

Independent colleges and universities are also an important part of Ohio's system of higher education. For over 150 years, our independent institutions have been a primary source of higher education for Ohioans; in fact, until 1951, most of the state's college and university graduates received their degrees from these schools.

Today, the 61 colleges and universities in the independent, non-profit sector enroll some 95,000 students. Over 16,000 people are employed by the 36 member schools of the Association of Independent Colleges and Universities of Ohio and these institutions have operating budgets totalling more than $300 million. They also generate another $20 million in gift money which is part of Ohio's higher education resources.

Recognizing the value of this system, the state works closely with independent colleges and universities, providing certain forms of aid and seeking to develop programs of cooperation between the state-assisted and independent sectors. A fuller discussion of these activities will be found in the separate chapter on Independent Higher Education.

Proprietary Education

Proprietary education refers to the for-profit schools, including correspondence schools, which offer courses of study ranging from two-week skills programs to work at the associate-degree level and beyond. It is estimated there are over 8,000 proprietary schools in the United States today, enrolling some 3,000,000 students in courses which include such occupational categories as truck driver, beautician, secretary, radio-television repairman, computer programmer and engineering technician.

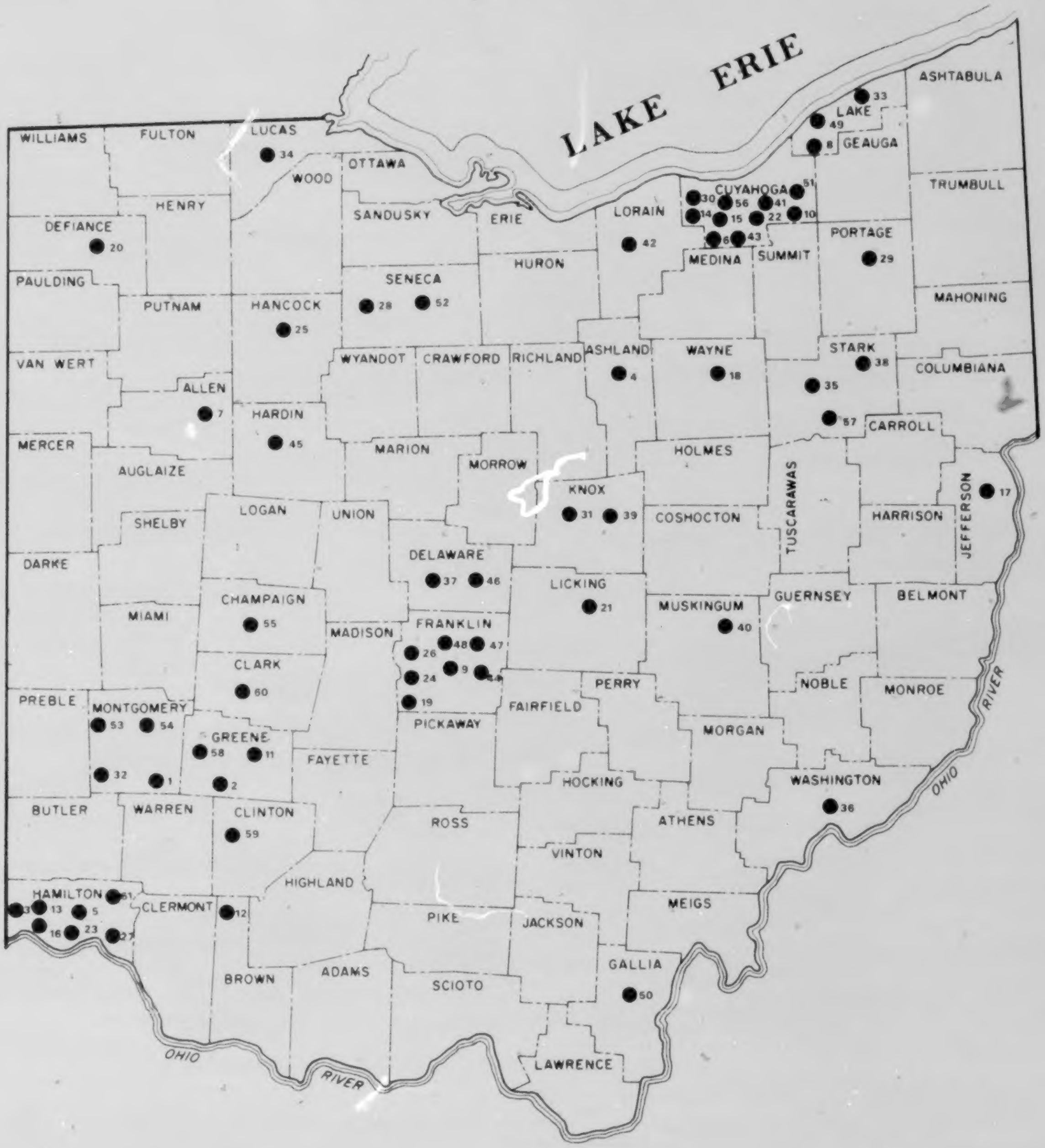
Ohio has 208 such schools registered with the State Board of School and College Registration, the agency which licenses proprietary institutions offering business, home study and trade courses. According to the Registration Board's 1975 annual report, there were over 38,000 Ohio students enrolled in the 159 Ohio proprietary schools which furnished the Board with statistics. Proprietary schools in the state range in size from small operations of ten students to institutions of 2,700 students. Twenty-five of these institutions offer associate-degree programs which are approved by the Board of School and College Registration. Many of the proprietary schools are accredited by peer review through their own accrediting organizations and often their students can qualify for certain federal student-assistance programs.

Occupational Education

Many institutions in Ohio offer programs of adult occupational education, including state and independent colleges and universities, proprietary schools, and public vocational schools administered by the state Division of Vocational Education. In the latter schools,, most students are high school youth enrolled full-time in vocational secondary education, but last year there were also more than 230,000 class enrollments in adult occupational-education courses. A majority of these were in short-term courses sponsored by the Division of Vocational Education and usually offered at night in high schools. The Division also sponsors a few programs which adults can attend during daytime hours as full-time students.

Some 12,000 adult students are also enrolled in associate degree programs on Ohio's state two-year campuses, with funding jointly by the Vocational Education Division and the Board of Regents. Overall, the financing of adult occupational programs is provided mostly by federal funds and student fees, with the federal money administered by the Division of Vocational Education. In addition, the Division also receives some state money for its occupational education programs.

INDEPENDENT
COLLEGES AND UNIVERSITIES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WARREN
CLINTON
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ROSS
ATHENS
VINTON
HAMILTON
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27
CLERMONT
12
HIGHLAND
PIKE
JACKSON
MEIGS
GALLIA
50
BROWN
ADAMS
SCIOTO
LAWRENCE
OHIO RIVER
OHIO RIVER

Independent Non-Profit Colleges and Universities

1. Air Force Institute of Technology
2. Antioch College
3. Art Academy of Cincinnati
4. Ashland College
5. The Athenaeum of Ohio
6. Baldwin Wallace College
7. Bluffton College
8. Borromeo Seminary of Ohio
9. Capital University
10. Case Western Reserve University
11. Cedarville College
12. Chatfield College
13. Cincinnati Bible Seminary
14. Cleveland Institute of Art
15. Cleveland Institute of Music
16. College of Mt. St. Joseph
17. College of Steubenville
18. College of Wooster
19. Columbus College of Art and Design
20. Defiance College
21. Denison University
22. Dyke College
23. Edgecliff College
24. Evangelical Lutheran Theological Seminary
25. Findlay College
26. Franklin University
27. Hebrew Union College
28. Heidelberg College
29. Hiram College
30. John Carroll University
31. Kenyon College
32. Kettering College of Medical Arts
33. Lake Erie College
34. Lources Junior College
35. Malone College
36. Marietta College
37. Methodist Theological School of Ohio
38. Mount Union College
39. Mount Vernon Nazarene College
40. Muskingum College
41. Notre Dame College
42. Oberlin College
43. Ohio College of Podiatry
44. Ohio Dominican College
45. Ohio Northern University
46. Ohio Wesleyan University
47. Otterbein College
48. Pontifical College Josephinum
49. Rabbinical College of Telsche
50. Rio Grande College
51. St. Mary Seminary
52. Tiffin University
53. United Theological Seminary
54. University of Dayton
55. Urbana College
56. Ursuline College
57. Walsh College
58. Wilberforce University
59. Wilmington College
60. Wittenberg University
61. Xavier University

Occupational education is also provided through the federal Comprehensive Employment Training Act (CETA) which sets up programs designed to train or retrain unemployed workers for new positions. Under the Act, revenue-sharing money is channeled through the state, counties and cities, with much of the training being conducted by other agencies on a contractual basis. The CETA programs are initiated and controlled by local officials and are independent of other adult occupational education activities.

Cooperation

With a system of higher education as diverse and complex as Ohio's, cooperative planning is extremely important and promises substantial benefits in terms of both improved services and the more efficient delivery of those services.

Cooperation is already under way in many areas. On the state level, there is significant activity which involves cooperation between the Board of Regents and state-assisted colleges and universities in the area of energy research, a project designed to move Ohio to the forefront in this vital contemporary field. Other cooperative projects, statewide in nature, include work in the areas of off-campus plans and programs and the improvement of teaching.

In addition, there are many examples of specific inter-institutional cooperation involving both the state and independent sectors. At present, seven universities and technical colleges share locations, cooperative arrangements which contribute to more efficient operation and broader educational opportunities for their students. Two of the state's two-year institutions have also established unique contracts with two independent colleges, Rio Grande and Wilmington, under which the latter schools provide instructional services for the state college students.

These cooperative ventures, many the outgrowth of institutional initiative, point up the varied forms cooperation can take and also the future potential of this type of activity. They also point up the need for continued stimulation of cooperative efforts and the necessity of continued state financial assistance for them. As discussed in the chapter on quality, the Board of Regents will seek a line item appropriation for innovation and system improvement in part to stimulate cooperation among the colleges and universities.

Regional Consortia

Regional consortia can represent an important form of cooperation among institutions of higher education. Both general-purpose and specialized consortia have been formed for various purposes throughout the state.

Consortial arrangements can cover a wide range of higher education activities, including joint programming, faculty exchanges, joint purchasing arrangements, cross-registration of students, and joint efforts to secure outside funding for projects and programs. Operating effectively, consortia are one mechanism for achieving financial savings for member institutions and for fostering broad-based cooperation which can lead to improved educational services within the area involved.

Ohio's consortial groups have achieved measurable results and hold promise for the future. But it is important to view them realistically, recognizing that if they are to operate effectively, certain attitudes and conditions must prevail. These include strong, continuing leadership by college trustees, faculty and administrators, state involvement and possibly some external funding, agreement among the participants that the arrangement is beneficial, and a willingness to accept the fact that some consortial benefits will be intangible and not reflected in bottom-line figures. Without these attitudes and conditions, consortial arrangements will be difficult to establish or sustain.

CHAPTER IV
Independent Non-Profit Higher Education

Summary

Ohio's independent, non-profit colleges and universities make important contributions to higher education. Largely supported by student tuition and private funding, they also receive some public financial assistance, including tax exemptions, student aid in the form of Ohio Instructional Grants and student loans, and selected contracts for services.

Despite these resources, the independent campuses face a troubled future, in large part because state institutions can offer quality higher education at far less cost to the student. Recognizing the seriousness of this competitive challenge, the Board of Regents in 1975 issued a statement on Public Policy Toward Independent Colleges in Ohio. In its statement, the Board expressed the strong conviction that "state and independent education must be considered as a collective resource" and developed some broad policy guidelines to help assure the viability of the independent campuses. These guidelines stress access and choice as major elements of education policy and emphasize the need for close cooperation between the state and independent sectors to assure a broad range of higher education opportunities. For its part, the Board pledged a strong effort to make independent and state institutions full partners in the planning process, noting also that only honest, two-way communication will promote confidence and cooperation.

The Board's guidelines do not answer all of the questions concerning independent higher education and its relation to the state sector. But they do provide a framework for the comprehensive planning which is needed to resolve many of the problems and concerns that now trouble our independent colleges and universities.

Chapter IV

Ohio's 61 independent, non-profit colleges and universities are an integral part of the state's system of higher education. Though largely supported by student tuition and private funding, they also receive some public financial assistance, which is provided to assure the continued viability of the independent campuses.

This aid includes tax exemptions, student aid in the form of Ohio Instructional Grants and student loans, and selected contracts for services. There are special contractual arrangements with Case Western Reserve University in the health fields, and special contracts with two independent colleges, Rio Grande and Wilmington, to provide instructional services for students in state two-year colleges.

State aid is also provided through the Ohio Higher Education Facilities Commission, which issues revenue bonds to construct facilities on independent campuses and then leases the facilities to the independent institutions, with the rent being used to retire the bonds.

The Board of Regents is well aware of the importance of Ohio's independent campuses and in 1975 issued a statement on Public Policy Toward Independent Colleges in Ohio, which took a searching look at the system. The policy statement noted that despite the private and public support available to them, the independent campuses face an increasingly troubled future. Today, the state-assisted institutions offer a competent, well-accepted, widely available alternative, providing quality higher education at far less cost to the student. Faced with this competition, many independent colleges and universities will be hard-pressed to maintain themselves in the years ahead.

The Board studied this problem in depth, recognizing that there is no easy solution. But in its policy statement the Board expressed the strong conviction that "State and Independent education must be considered as a collective resource, both components of which are necessary to provide higher education services to the citizens of Ohio." And the Board added: "It must also be recognized that the process of developing the alliance of state and independent higher education will take continuing effort, and that it must be a cooperative effort, not a confrontation."

The Board also developed some broad policy guidelines. Some of these, such as the ones involving the Ohio Instructional Grants program and graduate education, are found in other sections of this Master Plan. Others which are of considerable importance to the planning process are repeated as recommendations here.

1. **Service to Ohioans will be the first consideration with a recognition that access to a broad range of quality programs at a reasonable cost is the goal.**
2. **The impact on independent higher education of all public programs at all levels will be considered before programs are established. This does not imply, however, that an independent institution will be protected simply because it is there. Independent and state institutions will be involved in all local planning and as a matter of good faith the Board of Regents strongly urges independent institutions to confer with state institutions before initiating new programs in competition with established programs. Only honest two-way communications will promote confidence and cooperation.**
3. **The Board of Regents will work to make independent and state colleges full partners in planning. To do this will require participating institutions to make information about their operations available generally. The Chancellor is directed to pursue as rapidly as feasible the beginnings of data exchange to which independent colleges have already given support.**
4. **The Board of Regents calls upon the administrations and trustees of state-assisted institutions, when a new service area seems warranted, to consider the possibility of adding to their resources by contracting with nearby independent institutions for facilities, programs, or courses, rather than by expanding their own plant or faculty and staff. Each independent school must decide for itself the degree to which it can offer services to state colleges without undermining its own clientele.**
5. **The Board of Regents believes that second only to access to quality services is the issue of freedom for the student to choose among programs. The Regents will continue to consider carefully programs which increase the choice of a student among types of institutions, size of institutions, and programs.**
6. **The Board of Regents does not believe that generalized grants should be available to independent colleges. Problems of accountability for public funds and constitutional prohibitions against assistance for purposes**

related to religion give such proposals dubious value. In some highly restricted areas where public facilities cannot provide services and where local study groups so recommend, there may be special exceptions made by contract.

These guidelines do not answer all of the questions concerning independent higher education and its relation to the state sector. But they do provide a framework for the ongoing comprehensive planning which is needed to help resolve many of the problems and concerns which now trouble our independent colleges and universities. Through this planning, the state and independent sectors - working together - must develop a response to the present situation that will preserve what is best in Ohio's independent system, thus assuring continuation of its unique and valuable services to the state.

CHAPTER V

Eliminating Barriers to Access

Summary

Access to our colleges and universities must be assured for every person who wants and can benefit from higher education. But at present there are problems of access which limit opportunities for some groups and individuals. These problems can be resolved only if there is a continuing effort to strike down barriers which stand between our campuses and potential students.

One major barrier is cost. Ohio is a high tuition and fee state, with students paying approximately 35 percent of the cost of instruction, compared with a national average of 25 percent. The percentage paid by Ohio students has declined over the past three biennia, but there is a clear need for even further reductions. The Board of Regents recommends that the student share of the cost of instruction continue to decline until it approximates the national average.

Lower student fee charges promote access and so does student financial aid. The Ohio Instructional Grants Program (OIG) is the state's most significant aid program. Its basic form, with aid limited to instructional and related fee payments, should be continued, and full funding provided for those students eligible under current requirements before any changes are made. The Board of Regents is committed to seeking an increase in the level of OIG grants and will seek OIG assistance for certain students not now eligible for the program. In the next biennium, the Board will also empanel a special committee on access to review the various approaches which can be used to remove financial barriers to higher education.

Lack of information about higher education and complex admissions procedures can also be barriers to our campuses. To assure that potential students have access to necessary information about higher education services, the Board of Regents favors a statewide system of information and referral centers and will seek an appropriation for these centers. To eliminate admissions barriers, the Board recommends that all institutions carefully examine their procedures to ensure that no unnecessary procedure or lengthy time period is involved in admissions processing. The Board plans to convene a special ad hoc committee in the next biennium to study the whole question of admissions policy.

Another set of barriers confronts physically handicapped students. These include physical obstacles - narrow doorways, steps, buildings without elevators - and attitudinal barriers, among them misconceptions about the capabilities of handicapped students. Some progress is being made in eliminating these barriers and there will be more in the future as a result of recommendations made by the Regent's Advisory Committee on Service to Physically Handicapped Students.

Barriers to higher education are also created by the social experiences and educational background of many students. Some who come from disadvantaged environments or have different cultural backgrounds need developmental education, including counseling and special tutoring, to assure success at the college level. Other students need remedial education to overcome deficiences in math and/or English skills. The Board of Regents favors increasing the current state commitment to developmental education where the need for new types of services can be documented and will work to see that the current line item

appropriation remains at a level which at least helps colleges and universities deal with the twin issues of inflation and increased enrollment. The Board will also ask the special ad hoc committee on admissions to explore the question of the state's role in helping campuses finance remedial education.

Similar problems also exist on independent college campuses. Therefore, the Board recommends that for the purposes of developmental education, grants be paid to independent institutions for OIG students who come from families with less than $10,000 gross income.

In addition to striking down barriers, our colleges and universities must continue and increase their efforts to recruit minority group members and women as students. They must also strengthen present efforts to provide equal employment opportunities through affirmative action hiring. To achieve these objectives, the Board of Regents recommends that all institutions review the programs and policies which relate to affirmative action recruitment and hiring to assure their effectiveness.

Chapter V

Who should go to college?

The answer to that depends on a number of things: the personal characteristics and interests of individuals, their career aspirations, and the type of education they require to realize those aspirations. Not everyone needs or desires a college education, and there are opportunities in our society for many people who do not go on to our colleges and universities.

But there are many others who want higher education - and should have it - because for them it can be of enormous benefit in terms of personal development, career opportunities, and their contributions to the society in which they live. These are the people who are turning in increasing numbers to higher education, seeking a variety of services from our colleges and universities. In the marketplace, they are saying, clearly and decisively: "We want more and better education."

To satisfy this need, the men and women who desire and can profit from higher education must be assured access to postsecondary educational opportunities. Artificial barriers to their entrance must be identified and struck down, so that none are prevented from enrolling because of obstacles over which they have no control.

In its 1974 report, the Citizens' Task Force on Higher Education noted that Ohio's rates of participation in higher education relative to population were well below the national average. At the time the report was issued, to reach the national average Ohio would have needed another 80,000 students in its colleges and universities. This situation remains unchanged; the 1976 Carnegie Foundation report on "The States and Higher Education" also shows below average participation for Ohio, and this despite a record increase this year in enrollment throughout the state system.

This situation cannot be blamed exclusively on barriers which discourage enrollment. There are other factors which probably influence college attendance in Ohio. First, the state's emphasis on durable goods manufacturing and the high level of unionization among workers have produced large numbers of well-paying jobs which have not required a college education. This has undoubtedly drawn many young people directly into the labor market. Second, Ohio has a strong, well-developed vocational education program at the secondary-school level which may have diverted many potential higher education students away from the colleges and universities. Third, Ohio was late in developing a two-year campus system, with the result that for many years this important option was not available to high-school graduates.

There is no firm evidence linking these factors with Ohio's below-average enrollment, but it seems likely that they have contributed. At the same time, however, it must be recognized that the barriers to higher education which exist in Ohio also have a limiting effect on enrollments, and it is these barriers which must be eliminated if the state is to continue to broaden opportunities for higher education and raise its participation rates to at least the national average.

For most potential students, particularly traditional-age students, there are three major kinds of barriers to higher education: financial, invisible, and developmental. Each of these barriers is examined in the following pages, and recommendations offered to resolve the problems they present.

Financial Barriers

The first barrier is cost. If a student or his family lacks money to pay for higher education, and has no way of getting it, then campus gates are blocked as effectively as if they were physically barricaded. The National Commission on the Financing of Postsecondary Education has found cost to be one of the most important considerations, particularly as it affects the enrollment of students from lower-income families. Reporting on participation rates, the Commission noted that the enrollment of youths from families with annual incomes above $15,000 was nearly 69 percent nationally, compared with a less than 30 percent enrollment of students from families earning $7,500 or less annually. There are obviously other factors which in part account for this difference; for example, studies reveal a high correlation between enrollment and students' high school backgrounds and their fathers' occupations. But it is equally clear that the cost of higher education is a major barrier to access, especially for students from lower-income families.

Tuition and Fees

Some costs associated with higher education form barriers which are either beyond the state's power to remove or with which it has chosen not to become involved. These costs include the immediate income which students forego when they choose college instead of a job, travel and living expenses, and the cost of board and room at a residential university. Students must surmount these barriers largely through their own efforts or with outside assistance.

The state does, however, play an important role in either raising or lowering financial barriers by the decisions it makes regarding tuition and fees. The student and state shares of higher education costs are clearly set out in the formula budget models used by the state, and can readily be translated into instructional-fee charges to the student.

Traditionally, Ohio has been a high tuition and fee state. The 1976 Carnegie Foundation report on higher education shows that during the 1973-74 academic year, Ohio had the fourth highest public tuitions overall. According to other recent surveys, its two-year campuses had the second highest average. Other states are now beginning to edge toward the Ohio level because our own instructional fees have been virtually frozen for three straight bienna, but this does not change the fact that Ohio stands near the top of higher education's fee and tuition ladder.

Some percentage figures help spell out Ohio's position. Currently, the average student pays approximately 35% of the cost of instruction, with the state picking up the other 65%. This average share varies, of course, according to the level and type of program in which a student enrolls. Ohio's current percentage shares represent some improvement over the last biennium, when there was a 40/60% split between students and the state, but still do not approximate the national average of 25/75%.

From these figures it can be seen that Ohio's present fee and tuition charges for higher education continue to constitute a serious barrier to access. **Recognizing this, the Board of Regents recommends that the student share of the cost of instruction continue to decline, as it has for the past six years, until the student/state shares approximate the national average.** The Board is committed to seeing that Ohio's system of state-assisted colleges and universities is characterized by relatively low fee and tuition rates, and that the importance of this in terms of access is recognized as a major factor in budgetary decision making.

The Board believes that the cost of tuition at Ohio's two-year campuses is already too high. It also believes a strong argument can be made that the state should provide a greater share of lower division costs to help hold down the skyrocketing expense of higher education for beginning students and thus facilitate access.

Student Financial Aid

Fee and tuition charges can never be set low enough to eliminate this financial barrier for every student. Therefore, other means of facilitating access must be pursued and one of the most important of these is student financial aid.

In Ohio, state activity in the student aid field includes the Ohio Instructional Grants program (OIG), the Ohio War Orphans Scholarship program, and the Ohio Guaranteed Student Loan program. In addition, there is the Central State University tuition waiver program, plus important contributions to student aid from the federal government, individual institutions and private groups.

As part of its effort to help assure barrier-free access to higher education, the Ohio Board of Regents in 1975 appointed a special ad hoc committee to study the state's role in student aid and to evaluate the Ohio Instructional Grants program. The committee carried out an extensive review between January and July of 1975 and submitted a report which forms the basis for the analysis and recommendations on student aid included in this Master Plan.

The Ohio Instructional Grants program was launched in 1969 to assist students from low-income families with instructional and other related fees at both state-assisted and independent institutions. The program has grown steadily in terms of the number of students receiving grants, and in the 1975-76 academic year provided financial assistance to 49,000 students. Until the 1975-77 biennium, the program also grew substantially in terms of eligibility and the level of grants. At its inception, the OIG program was available for students from families with adjusted effective incomes up to $9,999, providing maximum grants of $300 for students attending state-assisted colleges and universities and grants up to $900 for others attending independent institutions. By the start of the 1975-77 biennium, eligibility had been moved to $14,999 adjusted effective income, with maximum grants of $600 and $1,500, respectively, for students in state-assisted and independent institutions. The levels of eligibility and the grants have remained approximately the same for fiscal 1976-77; adjusted effective income has been changed to gross income, with the maximum allowed moving to $16,999.

By every standard of measurement, the OIG program is an important means of promoting access to Ohio's colleges and universities, striking as it does at the financial fee barriers which can loom so large for students from lower and middle-income families. The special Ad Hoc Committee on Student Aid emphasized this in its report to the Board and also recommended that the payments of Ohio Instructional Grants continue to be limited to instructional fees. **The Board is in full agreement with this and continues to recognize that the singular role for Ohio Instructional Grants should be to assist with instructional and related fee payments.**

From its review of the ad hoc committee's student-aid study, the Board of Regents has also developed three recommendations which should be assigned top priority in future handling of the OIG program.

First, it must be recognized that the prime objective of future OIG funding should be to assist fully those students who are eligible under current program requirements. **The Board urges the General Assembly and the Governor's office to weigh carefully the importance of providing full funding for these students before any changes are made in the program.** This should include full funding for diploma nursing students, as noted in Chapter IX on Health Personnel Education.

Second, the Board is committed to seeking an increase in the level of OIG grants for students attending both state-assisted and independent institutions.

Third, to further broaden access, the Board of Regents will seek OIG assistance for students not now eligible for the program. These include part-time students, students from families with gross incomes over $16,999 and students attending schools not now eligible for participation.

Further improvements in the OIG program may be possible, but they should be considered in relation to other approaches designed to eliminate barriers to access. The Ad Hoc Committee on Student Aid noted this in its report, suggesting that the Board of Regents consider in future deliberations on access the relative merits of such options as increased subsidies to help maintain current operations at state-assisted institutions, increased access provided through low tuition or larger grants, and increased choice as provided by the current OIG assistance program.

Responding to this suggestion, the Board of Regents will in the next biennium impanel a special committee on access to develop a method of analyzing these budgetary options. The committee will also be charged with providing advice to the Board on the most effective means of promoting improved access. During preparation of the budget for the 1977-79 biennium, the Board will continue to consider the opportunities for increased access which could be created by holding fees at the lowest possible level and by increased funding of the OIG program.

The Ohio Instructional Grants program represents Ohio's major commitment in the field of student financial aid. But there is also another aid program which promotes access for a much smaller group of students. This is the War Orphans Scholarship program, which benefits a limited group of students whose parents were killed or disabled while in the U.S. military service during a period of armed conflict. This program provides financial assistance for tuition and fees at state colleges and universities. To further expand the access provided through War Orphans Scholarship aid, consideration should be given in the future to extending this program to cover students attending independent colleges.

Guaranteed Student Loans

Not every student who is confronted by financial barriers to higher education is eligible for financial aid. But for those who are not, access is often possible if they can borrow the necessary money.

The Ohio Student Loan Commission works to facilitate borrowing by those students who need loans to enable them to enroll in the state's colleges and universities. The Commission is a state guarantee agency; as such it insures educational loans made by private lenders who voluntarily loan their own money to students for educational purposes. The Commission itself does not lend money, nor can it order any private financial institution to provide loans for students. But, through its activities as a guarantee agency, it stimulates private loan activity and thus makes an important contribution to improving access. During calendar year 1975, private lenders approved 20,614 loans, valued at $30,787,048. In the same year, the volume of loans under active guarantee increased from $136,817,769 to $153,386,938.

Invisible Barriers

The financial barriers to higher education are tangible and easy to recognize. But, for many people seeking higher education, there are other obstacles which, though less apparent, can be equally detrimental. These roadblocks are related to information, procedures and policy - a grouping often referred to as the "invisible barriers."

People are often blocked from the higher education they desire because they lack necessary information and have no idea how to go about acquiring it. Career counseling, choice of schools or programs, advice on financial assistance - all of these are complex issues and if people do not know where to turn for help and information, they can become discouraged and give up their efforts to enroll in a college or university.

There is no doubt that this happens, perhaps more frequently than we imagine. The information barrier is a serious obstacle to higher education. To overcome it, there is a need for imaginative programs designed to reach those people most likely to be handicapped by lack of information about our colleges and universities and the opportunities they offer.

One way to reach these people is through the establishment of a series of information and referral centers throughout the state. The success of the Educational Opportunity Center in Dayton and the Cleveland Scholarship Program clearly indicate that such centers can play a significant role in closing the higher education information gap. **The Board is still committed to this concept as an important means of promoting access and will seek an appropriation for these information and referral centers.**

In addition to this action, the Board will also continue its efforts to identify other methods of providing information on higher education to the general public. Over the next year it will seek to identify special groups needing information on higher education and take steps to provide it through a special awareness program.

As it proceeds with these efforts, the Board will also work to correct practices which, in the past, have resulted in some valid criticism of the promotion of higher education. **In this connection, the Board urges each college and university to conduct a close examination of its own literature and techniques for recruiting to be sure that full information is provided.** Claims about future job opportunities should be based on actual placement records, reports on technical associate-degree programs should discuss the limits of credit transferability, and a reasonable policy on refunds should be in force. The Board itself will examine its own literature and information programs to assure full and accurate information.

Admission

The processing and policies for admission to a college or university can also form invisible barriers to access, if only because of their variety and complexity. They often involve different deadlines and procedures, growing out of the policies of individual institutions. Some may relate to the limits of class or program size, others to the amount of time required for processing applications. Whatever the rationale or justification for these policies, their possible impact on access should be recognized so that what a given college may view as "standard operating procedure" does not, in fact, become a barrier to potential students. **To guard against this, the Board of Regents recommends that all institutions, particularly those serving urban areas or large numbers of part-time students, carefully examine their admissions procedures to ensure that no unnecessary procedure or lengthy time period is involved in admissions processing.**

Ohio's open-admission policy has been the subject of considerable discussion. The Ohio Revised Code states that twelfth-grade graduates are entitled to admission without examination to any college or university supported wholly or in part by the state. The Board of Regents, in its 1971 Master Plan, recommended that state policy as written guarantee admission to two-year campuses, while allowing admission standards for entrance into a baccalaureate program to be determined by individual boards of trustees.[2] The Board recommendation further stated that "associate degree graduates shall be admitted to baccalaureate programs without further qualifications." Nothing in the recommendation would provide for guaranteed admission to programs where restrictions relating to class size and type of background required are important.

In the years since 1971, several things have changed. The two-year campus system has become more complete both in terms of program at existing campuses and through the addition of several new campuses. Three universities, Bowling Green, Miami, and Ohio State have reached statutory limitations on enrollments and now require earlier applications and more selective admissions. Pressure for direct admission to certain programs has increased with changes in student interests and job opportunities. And concern has been expressed over the problems of credit transfers.

Present state law does not foreclose study of the admissions issue and these changes point up the need for a comprehensive evaluation. **Therefore, the Board of Regents will convene a special ad hoc committee in the next biennium to look at the question of admissions policy.** The committee will be charged with advising the Board on:

1. The appropriate role for state policy in the area of admissions. This will include a report on the benefits and problems involved in establishing special entrance requirements for selected universities.
2. The role of the two-year campus and university system in ensuring access.
3. The role of appropriate affirmative action programs in improving access to all our campuses for all types of individuals.
4. The role of statutory enrollment limitations, including a study to determine whether they should be extended to other institutions.
5. Methods for continued improvement of articulation among campuses.
6. The feasibility of establishing a single application form for all state universities and two-year colleges.

The Board of Regents will utilize the committee's advice in formulating new recommendations for the Ohio General Assembly.

Physically Handicapped Students

There is another set of obstacles to access which can be classed as "invisible barriers" in the sense that they go unrecognized by most of the students at our colleges and universities. But these barriers are extremely visible and formidable to one group of people - the physically handicapped students who are either now on our campuses or seeking to get there.

Barriers to the physically handicapped fall into two categories. There are physical obstacles in the form of narrow doorways, steps, buildings without elevators, and inaccessible fountains, lavatories, telephones, and dormitory facilities. And there are attitudinal barriers, including misconceptions about the capabilities of handicapped persons, rigid medical and physical requirements, inflexible curricula and testing, and inadequate support services.

These barriers deny or sharply restrict access to higher education for many handicapped people in Ohio. And the numbers involved are significant; some 600,000 Ohioans outside of institutions have some form of physical disability and this group includes approximately 6% of the state's pool of potential students for higher education.

For a long time the barriers standing in the way of handicapped students have remained invisible to nearly everyone but the handicapped themselves. But now, Ohio is beginning to take action. The General Assembly in its capital appropriations for the 1975-77 biennium included a special appropriation of $2,500,000 to finance the removal of these barriers on state campuses. In January, 1976, the Board of Regents also established an Advisory Committee on Service to Physically Handicapped Students and the committee was charged by the Chancellor with presenting "a set of recommendations that point the way to making higher education in Ohio barrier-free for the physically handicapped." After several months of detailed study, the committee issued its report, which included the following recommendations:

First, that the Ohio Board of Regents should establish a standing advisory committee to make recommendations on the continuing progress and problems of physically and other functionally handicapped students at the higher education level.

Second, that the Board of Regents should seek funds to make all public higher education institutions architectually barrier-free by 1985 (with one-half of all institutions barrier-free by 1980) and should develop plans for consideration by the legislature which would fund removal of architectural barriers on independent college and university campuses.

The advisory committee also recommended the development of consultive services for institutions, categorical funding for a limited number of special support service programs at colleges and universities, information programs on access to higher education designed to reach the physically handicapped, and research to seek innovative ways of delivering postsecondary educational services to all handicapped individuals.

Implementation of these recommendations will take time and the present barriers to handicapped students will not tumble overnight. But the full dimensions of the problem are now recognized and this is another vital step toward assuring easier access to our colleges and universities for a group of people who have special needs.

Developmental Barriers

The barriers to higher education are not all external. Many students are also confronted by what we identify as developmental barriers, which arise out of their own background and previous educational experience. These can limit both their interest in enrolling in higher education and their ability to succeed once they have entered a college or university.

In seeking to improve access, our institutions are attracting numbers of students who must surmount developmental barriers. This is a task which requires determination on the part of the students and an active effort by colleges and universities to assist them. In Ohio, this effort is well-established; our institutions are responding with programs designed to meet the specific needs of students who might otherwise find the doors to higher education permanently barred. These programs fall into two categories: developmental education and remedial education.

Developmental Education

Developmental education addresses itself to the handicaps which may result from a student's overall life experience. Today, many of the new types of students seeking higher education have distinctly different cultural backgrounds or come from disadvantaged environments, both factors which may make it difficult to adjust to the campus experience. Others are inadequately prepared for college-level work, having missed or failed to take advantage of secondary-education opportunities. And there are students who are handicapped by all of these problems.

The first encounter with the rigorous demands of higher education can be very discouraging for these students. Unprepared for campus life, lacking study skills and an adequate educational background, and perhaps further hampered by problems of image and identity, they are potential dropouts unless efforts are made to help them overcome these handicaps. This is precisely what developmental education is designed to do; through programs that include personal and academic counseling, special tutoring, and special courses to develop study skills, it helps students adjust to the campus and to acquire the academic skills and knowledge necessary for success.

These same programs also assist students who return to campus after long periods away from formal education. Their readjustment to higher education may be impeded by similar developmental barriers which can be surmounted only if they have the benefit of special counseling, tutoring and other assistance.

In the years ahead, higher education is certain to attract a significant number of students with developmental handicaps. The specific types of handicaps will change with the changing characteristics of the students coming onto our campuses and this means developmental programs must be flexible, they can respond to new needs and problems. **To assure this flexibility, the Board of Regents recommends increasing the current state commitment to developmental education where needs for new types of services can be documented. The Board is also committed to seeing that the current line-item appropriation remains at a level which at least helps state**

colleges and universities deal with the twin issues of inflation and increased enrollment.

In addition, the Board of Regents believes that the General Assembly should recognize that similar problems exist on independent-college campuses and are primarily associated with the enrollment of low-income students. **The Board continues to recommend that for the purposes of developmental education, grants be paid to these independent institutions for each students who receives an Ohio Instructional Grant and comes from a family with less than $10,000 gross income. While it is true that not all of these students need developmental education, it is a fact that many lower-income groups require this extra counseling and assistance. The state has a continuing interest in seeking to promote access for students from low-income backgrounds, since, at the present time, they are significantly underrepresented on our campuses.**

Remedial Education

Remedial education addresses the problem of poor student preparation, which is a cause for considerable concern at every one of our colleges and universities. Some campuses estimate that 40 percent of their entering students need to acquire supplemental mathematics and/or English skills prior to moving into regular college classrooms. In some cases this problem results from inadequate preparation at the elementary and secondary levels, in others from the failure of students to take appropriate preparatory courses before entering college. The same deficiencies are also found among students who enroll in college after having been out of school for some time. Remedial courses are designed to help these students reach the level of competence necessary for college-level work.

Given Ohio's open-admission law, each campus must be concerned about remedial education and develop courses which are consistent with its mission. Where appropriate, developmental education money should be used for these courses, as long as there is no action incorporating remedial education funding into the instructional subsidy.

The Board of Regents is also concerned about the need for remedial education. By developing a closer relationship with the Ohio Department of Education, it hopes to help resolve some of the problems of preparation which relate directly to the elementary and secondary school systems. But the Board also recognizes that this is a long-term process and that to deal with the immediate problem higher education must continue to place special emphasis on remedial programs. **Therefore, one of the Board's charges to the special ad hoc committee on admissions will be to explore the question of the state's role in helping campuses finance remedial education. This study will seek to determine whether such financial assistance should be limited to certain types of institutions such as community colleges, university branches, and state general and technical colleges.** This charge relates closely to the development of a new state policy on admissions.

Developmental and remedial education programs must be offered by our colleges and universities to help strike down the developmental barriers which now exist. This does not mean that quality should be compromised; colleges and universities must maintain standards for admission and graduation. Developmental and remedial courses are designed to help students measure up to these standards by preparing them to do the quality work demanded at the college level. Therefore, the courses themselves must demand quality work by the students; otherwise the whole purpose of developmental and remedial education is negated.

Affirmative Action

Access to our campuses for new types of students is being promoted through affirmative recruitment programs which are designed to encourage enrollment by minority group members and women, both traditionally underrepresented in higher education.

Beginning in the 1960s and continuing today, Ohio's colleges and universities have made some significant efforts to enroll more of these students. With the exception of two years, 1972 and 1973, the number of minority students on the campuses has risen continually since 1965 and today comprises an estimated 13 percent of the total public enrollment. The number of women enrolled in state colleges and universities has also shown a steady increase, to the point where women now make up 45 percent of the total student body.

Some of these affirmative-action gains are directly linked to the urban locations of community colleges, other two-year campuses, and the urban universities. These institutions have been able to draw students from large populations which include sizable numbers of women and minority-group members. Affirmative recruitment and information programs in high schools with large minority enrollments have also been successful in attracting students, as have such special efforts as Project Search in Cleveland.

Overall, the affirmative action programs of Ohio's state-assisted colleges and universities have been fairly effective, although there are still institutions where the enrollment levels for women and minorities suggest a less-than-maximum effort. At this point, none of our institutions can justify resting on their laurels and easing away from affirmative recruitment programs. This would quickly wipe out existing accomplishments and re-erect the barriers to higher education which have stood in the path of minority groups and women. Instead, our colleges and universities must commit themselves to even stronger recruitment efforts so that their records of achievement in this crucial area continue to improve.

Equally important, the colleges and universities must make special efforts to resolve the continuing access problems associated with specific areas of higher education. Minority and women students are still grossly underrepresented in such undergraduate areas as engineering, the natural sciences, and business. The same degree of underrepresentation is also present at the graduate level and in health personnel programs, as noted in the chapters on graduate and health personnel education. **Stronger efforts must be made to attract women and minority students to these areas of study and the Board of Regents recommends that all colleges and universities carefully examine their current affirmative recruitment programs, strengthening them where necessary to achieve this objective.** Money from the state line-item appropriation for developmental education can continue to be used for this purpose.

All institutions of higher education must also provide equal employment opportunities through affirmative-action hiring, not only because of the large number of people they employ (over 19,000 faculty alone), but because of the image they project for students in attendance. In this area of equal opportunity, there is a clear need for greater commitment and effort. This is all the more important because, by assuring equal access to employment, colleges and universities can provide the role models which will attract minority and women students to higher education and encourage them to continue their studies once enrolled.

Admittedly, affirmative-action hiring is not always an easy process. While equal-opportunity employment is the law, the pattern of enforcement, involving both federal and state authorities, is often a tangled maze of regulation, data gathering, and overlapping jurisdictions. Current procedures often entail excessive costs, reinforce hostile attitudes, and draw attention away from the important principles of affirmative action. This can be very damaging to the whole procedure and both federal and state governments must, in their enforcement efforts, work to eliminate the minute details and procedures which now complicate compliance. Otherwise the main purpose of promoting employment for minorities and women will continue to be overshadowed.

But the complexities of enforcement should not affect the response of our colleges and universities. They must work to improve their existing programs of affirmative-action hiring. Special efforts should be made in areas and departments where minorities and women are clearly underrepresented, for it is here that the lack of role models or images often impedes efforts at affirmative recruitment. It should be recognized that the benefits derived from affirmative action accrue to the university, its student body, and to society at large by better utilizing the reservoir of skills and resources found among minorities and women.

The Board of Regents strongly recommends that each college and university take the initiative in assuring equality of employment opportunity in higher education. The Board further recommends that each institution regularly review its internal systems and policies to determine if there are any which have a detrimental effect on the employment of women and minorities.

CHAPTER VI
Developing Quality in Higher Education

Summary

The quality of our higher education system is influenced by the actions of individual boards of trustees, faculties and administrations, planning at both the state and institutional levels, and financing. State responsibility is exercised through the Board of Regents, which is committed to a program of cooperative planning and action designed to assist Ohio's colleges and universities in their pursuit of quality.

This program involves both independent and state institutions. The Board helps promote quality on independent campuses through issuance of certificates of authorization allowing these colleges and universities to offer specific degree programs. In the years ahead, the Board will continue careful deliberations in the issuance of these certificates to ensure that the quality of academic programming is being maintained. The Board will also cooperate with surrounding states and regional accreditation associations to establish accrediting procedures for the off-campus and non-traditional programming of the state and independent institutions.

In the state system of higher education, the Board of Regents helps assure quality through the process of program review. The Board believes that this process must become even more comprehensive in the future, with individual institutions assuming greater responsibility for evaluating, strengthening, adding and eliminating programs. Therefore, it recommends that each state institution of higher education begin a review of its programs on a five-year cycle and report its findings to the Board.

Strong, accessible two-year programming is a component of quality in a system of higher education. Ohio has an impressive system of two-year campuses, but there are still areas of the state where such services are inadequate. Studies are presently underway in these areas as the first step toward providing essential services. The Board of Regents considers the establishment of comprehensive programming in every section of the state a priority for the two-year campuses and will continue to call attention to special problem areas.

Quality is also reflected in the ability of higher education to respond to specific needs and challenges. Many times there are local or state concerns which an institution can help resolve through special programming or other efforts. The Board of Regents strongly urges colleges and universities to respond to these opportunities for service when they arise.

Improvement in the teaching-learning process is essential for quality education, particularly now when our campuses are enrolling many students with lower skill levels. Considerable work is already underway in this area, with strong support from the Chancellor's Advisory Committee on Instructional Development. The Board of regents will continue to emphasize the importance of teaching through continuation of and support for the Chancellor's Advisory Committee for at least two more biennia. It also recommends that each institution implement a plan for continued professional faculty improvement.

To further promote professional development, the Board recommends that the legislature provide funds to renew the Regents' Professorships and to recognize excellence in the university and college system. The Board also recommends participation in the faculty exchange program established by the Ohio College Association.

Adequate funding is a critical component of quality education. It is also important that the individual colleges and universities retain broad discretionary power to allocate both public and private funds, since they are best equipped to distribute resources in a manner that will promote quality. The Board of Regents will continue to press for institutional discretion in the handling of funds and to support private university foundations for the receipt of special gifts and grants. In connection with the allocation of funds, the Board recommends that each institution establish budget procedures which allow for meeting unforeseen circumstances and also set aside special money for innovation and new programming. The Board itself will seek a

special appropriation for innovation and system improvement grants.

The quality of higher education can also be enhanced by attracting highly qualified students, including students from other states. The Board of Regents favors action to attract out-of-state students to Ohio and recommends that the General Assembly pass legislation authorizing the Board to negotiate reciprocity agreements with surrounding states.

Chapter VI

There is no simple definition of quality higher education - no precise, all-inclusive statement that says: "This is what we mean by quality."

Instead, there are many definitions, reflecting the fact that quality is related to the success of a single institution or a whole system in achieving a broad range of goals and objectives. The ability to attract and effectively educate students is one example of quality; success in acquiring and retaining superior faculty members another. Quality can also be defined in terms of the excellence of degree programs, research activities, and public service - how well these respond to the needs of students, faculty, and the wider community in which higher education functions. And it is reflected in the career and life experiences of graduates, whose achievements are often directly linked to the quality of their education.

Everything which strengthens higher education's ability to fulfill its mission enhances quality; everything which weakens this ability diminishes quality. Failure to protect academic freedom can diminish it; so can the failure to provide faculty members with opportunities for continued development. Quality is also damaged if programs and faculty do not keep current with the rapidly expanding world of knowledge, or if inadequate emphasis is placed on the teaching, research or public service missions of a college or university.

Above all, perhaps, the improvement or weakening of quality is related to the financing of higher education. Money alone cannot assure quality in any given area, but without adequate funding all the other efforts to build quality programs are bound to suffer. The funding of higher education must be at a realistic level or quality is certain to decline.

The challenging assignment to develop and maintain a quality system of higher education in Ohio requires a cooperative effort. Given Ohio's strong commitment to institutional autonomy, prime responsibility rests with the individual colleges and universities, their boards of trustees and faculties. Each institution must make the basic decisions regarding allocation of resources, development of curricula, hiring of faculty and administrative leaders, and planning for recruitment, counseling and other student programs. Exercising this broad authority, the individual colleges and universities play the major role in determining the depth, variety and quality of higher education programming throughout the state and in ensuring that the learning objectives of students are met.

But while the institutions themselves are the prime movers in the area of quality, they cannot achieve their goals without support from other sources, especially the state. Adequate funding by the state is absolutely essential to maintain the quality of both programs and facilities, as is the assurance of institutional flexibility in allocating those funds. Equally important, there must be continued state support of the basic principle of institutional autonomy, so that our colleges and universities retain the freedom to manage their own affairs and carry out their mission.

At the same time, within the framework of institutional autonomy, the state also has a responsibility to assist in planning for quality higher education. This responsibility is exercised through the Ohio Board of Regents, which engages in comprehensive planning both to improve quality and to assure that Ohio's long-term interests and needs are met by its system of colleges and universities. These planning activities include the development of coordination to make sure that unnecessary competition does not adversely affect individual institutions or the entire system. In addition, the Board also plays a key role in establishing the needs and credibility of the higher education system, which is an important assignment in terms of ensuring quality.

Other groups and agencies are also concerned with quality higher education, notably accrediting associations and the federal government. The accrediting groups work in specific fields of study and with general institutional curricula, setting and monitoring standards to assure high levels of performance. The federal government has acted to improve quality by defining new national objectives from time to time and through its financial support of university research and several health programs.

Ensuring and improving quality are not easy tasks. Quality mirrors in its complexity the education structure itself and both processes must take into account many factors, including the needs, interests and welfare of both faculty and students, the goals and missions of individual campuses, and the overall mission of the entire higher education system. This means that actions to ensure or improve quality, undertaken by the state through the Board of Regents or some other agency, must be preceded by careful planning and initiated with great care.

Recognizing this, the Board of Regents has committed itself to a program of cooperative planning and action designed to assist Ohio's colleges and universities in their pursuit of quality. During this period, the Board - working with individual institutions and the entire system - will seek to help improve the quality of programming, the teaching-learning process, and the ability of individuals to perform their own mission. The specifics of this planning process, together with recommendations, are outlined in the following sections.

Improving the Quality of Programming

In the area of programming and program review, the Ohio Board of Regents has responsibilities under the Ohio Revised Code which are closely related to ensuring quality higher education. These responsibilities involve both independent and state-assisted colleges and universities.

Certificates of Authorization

The Board of Regents is required by statute to review programs and degrees offered by independent, non-profit colleges. When it determines that an independent institution has the commitment and adequate resources to assure effective programming, the Board issues a certificate of authorization allowing the college or university to offer specific degree programs. The certificate, in turn, qualifies the independent campus to participate in the Ohio Instructional Grants program. Since the latter program was initiated in 1969, many independent institutions have sought certificates of authorization and the Board has been actively involved in evaluating their campus-based degree programs. This is a continuing process and will include, at some time in the future, a review of the programs now authorized by Board certificate.

The certificate system has worked well; it is an effective means of ensuring and improving quality on the independent campuses. But education is ever-changing and new developments have imposed new responsibilities on the Board of Regents as a monitor of quality. The growing interest in lifelong learning and the development of non-traditional program formats, including off-campus instruction, have created a need for new standards to evaluate programs, protect students, and assure quality.

In response to the concerns generated by these new educational needs and program formats, the Board, in May, 1975, established a new rule for the issuance of certificates of authorization which has standards for both on and off-campus programs. These standards, which are concerned with such areas as program purpose, academic control, curriculum development, and faculty qualifications, are used to evaluate new instructional activity by the independent campuses. The same standards have also been accepted by Ohio's state-assisted institutions for their new programming on and off-campus.

The quality of independent higher education will remain an important concern in the years ahead. **The Ohio Board of Regents will continue active, fair and careful deliberations in the issuance of certificates of authorization under current law and procedure to ensure that quality of academic programming is being maintained. The Board will also cooperate with surrounding states and regional accreditation associations to establish accrediting procedures for off-campus and non-traditional programming.**

A special review of the current rule related to the development of new institutions will also be conducted by the Board to determine whether that rule is adequate.

Program Review

In the state system of higher education, the Board of Regents helps assure quality through the process of program review. Traditionally, the Board has recognized that primary responsibility for the quality of new programs rests with the individual institutions and their faculties and this remains a major consideration. But, over the past few years, the Board has become more active in weighing questions concerning the need and possible duplication of programs at the graduate, baccalaureate, and associate-degree levels. These are questions directly related to quality.

An example of this activity is the review of technical-degree proposals. In evaluating these proposals, the Board is concerned with placement opportunities, input from local advisory committees, and provisions for a well-rounded curriculum as criteria to be met before approval is granted. Technical degree programs are also re-examined every fifth year by both the individual colleges and the Board to assure the upgrading of quality on Ohio's two-year campuses.

Another example of Board activity is found in the review procedure for baccalaureate programs. The Board expanded its activity in this area in September, 1975, amending its rule to request early notification of new degree-program development. The new requirement grew out of a concern, particularly in the health fields, that by the time programs reached the board it was too late to turn them down. This situation has been corrected by the amended rule, but as our colleges and universities continue to develop new programs to meet changing needs, the Board may find that further amendments are necessary.

Looking ahead, the Board of Regents sees the need for an even more comprehensive review process to assist both the Board and the individual institutions in evaluating, strengthening, adding, or eliminating programs. And the Board further believes that individual institutions must assume greater responsibility in this important effort to ensure and improve quality. **The Board therefore recommends that each state institution of higher education begin a review of its programs on a five-year cycle and report its findings to the Board. The Board has established a process for the collection of these reviews at two-year campuses through approval of new degrees for a five-year period; however, it recognizes that each campus must provide its own internal review for this program to succeed.**

The review of new graduate programs will be discussed as a separate issue in the chapter on graduate programming.

Comprehensive Two-Year Programming

Strong, accessible two-year programming is a component of quality in a system of higher education. Ohio has built an impressive statewide system of two-year campuses which offer a wide range of educational opportunities, including a comprehensive body of associate-degree programs. Now, the task is to continue to improve the quality of that system.

One objective must be to assure that diverse programming at the two-year associate-degree level is within reach of every Ohio citizen. This is primarily a concern of the two-year campuses.

A second major objective must be to provide or expand comprehensive two-year programming to those areas of the state where such services are still inadequate. Studies are now underway in several areas to determine educational needs as a first step toward providing essential services and, thus, improving the quality of the overall two-year system. **The Ohio Board of Regents continues to view the establishment of comprehensive programming in every area of the state as a priority for two-year campuses. The Board will continue to call attention to special problem areas and to challenge local initiative to overcome the problems.**

Special Programming Efforts

Quality is also reflected in the ability of higher education to respond to specific needs and challenges. Each campus in the state should be sensitive to the environment in which it operates because many times there are local or state concerns which an institution can help resolve through special programming or other efforts. There are many examples of this type of need; one is the challenge to offer strong international programming, which exists because of Ohio's leadership role in international trade. Additional areas where special programming and service may make valuable contributions include those related to other aspects of the state's economy, including the increasingly important field of energy.

The Ohio Board of Regents strongly urges colleges and universities to help meet these special needs. A quality system of higher education should always be ready to respond to these opportunities for service.

Improving the Quality of the Teaching-Learning Process

In no area is ensuring and improving quality more important than in the teaching-learning process. This is a continuing concern, but the need for action is crucial now because of changing demands on our colleges and universities.

A major problem is that posed by the lower skill levels of students now enrolling in college. In its September 15, 1975, issue, *The Chronicle of Higher Education* pointed out that the percentage drop in 1974 and 1975 test scores among those taking SAT and ACT tests was the largest on record. Another issue of the *Chronicle* noted that the ability to communicate in writing declined among 9, 13 and 17-year-olds in the period between 1970 and 1974. These developments point up the new challenges facing higher education. And, added to them, are the special problems of older students returning to college after long periods away from the formal education process.

Confronted by these changes, colleges and universities must increase their efforts to assure maximum quality in the teaching process. But the changes come at a time when new obstacles have arisen to hamper their ability to respond. Stabilizing enrollments have reduced faculty mobilify and diminished opportunities for professional growth, while at the same time restricting the ability of institutions to improve their faculty through outside recruitment.

With these avenues to improved quality partially blocked, the emphasis must be on other approaches. High priority must be assigned to in-service training programs for present faculty members and to efforts to ensure that new candidates for college teaching posts are well-grounded in effective teaching techniques. These steps are of critical importance in improving the quality of teaching to meet changing responsibilities. Colleges and universities should also continue to stress the use of teacher-evaluation programs which, by providing a structured assessment of teaching performance, can be another avenue to improved quality in the classroom.

Considerable work is already underway in this area. Several efforts have been initiated by the Board of Regents and various campuses to improve the teaching process. Some 35 institutions and a number of consortia throughout Ohio now have programs for in-service professional development in teaching. These programs have received strong support and assistance from a special advisory committee established in 1973, which is composed of representatives from both state and independent two-year and four-year institutions. This group, The Chancellor's Advisory Committee on Instructional Development, has held a number of conferences on instructional development, published a compilation of articles entitled Teaching in Higher Education, and established a pilot consulting network to identify potential resource people throughout the state.

The advisory committee has also made six recommendations to improve teaching quality for consideration in the Master Plan. These recommendations spell out six objectives which state policy should seek to promote, aiming toward their achievement by 1981. The objectives are:

1. All public and private institutions will have evolved and will be using indices for defining and measuring instructional effectiveness, stated in terms of learning outcomes.
2. All graduate programs normally leading to collegiate teaching will have incorporated the requirement that each candidate undertake specified training in the principles and practices of systematic instructional design.
3. Each public and private institution will have evolved and adopted its own philosophy of, and set of guidelines for professional development of teaching.
4. All public and most independent institutions in Ohio either will have committed hard dollars to the support of in-service programs to improve teaching or will be participating members in consortial arrangements providing such programs. (Several states including Washington and Florida have mandated a certain budgetary set-aside for instructional improvement and innovative projects).
5. All public and most independent institutions in Ohio will have evolved personnel policy statements and procedures for the recognition, support and reward of faculty who demonstrate their commitment to improve the quality of teaching in systematic and documentable ways.
6. Most faculty, in institutions at or through which in-service programs are available, will be cognizant of those services and a sufficient number of such faculty will be utilizing them so that the learning experience of most students will be improved.

Through its recommendations and overall work, the advisory committee has made important contributions to the improvement of teaching quality. **Recognizing this, the Board of Regents will continue to emphasize the importance of teaching through continuation of and support for The Chancellor's Advisory Committee on**

Instructional Development for at least two more biennia. The goals of this committee should relate to the development of models for institutional activity and to assisting institutions in the development of their own programs of instructional improvement.

The Board also recommends that each institution consider the best methods for implementation of a plan for continued faculty improvement, including:

1. **The establishment of in-service professional development programs.**
2. **The setting aside of funds from the instructional and general budget for the purpose of professional development in teaching.**
3. **The consideration and development of measures or indices of teaching and learning effectiveness related to the institution's own mission.**
4. **The development of personal policies that effectively reward evidence of quality teaching.**

The improvement of teaching techniques is vital to ensuring and improving quality in the teaching-learning process. But it is only part of the answer. The very best techniques will not improve learning if course material is outdated and does not reflect the growth of knowledge. This growth has been spectacular; in one field, engineering, it is estimated that one half of the accumulated knowledge of professional engineers becomes obsolete in five years and many other disciplines are experiencing the same rapid evolution. There must be continuing efforts to assure that new knowledge is incorporated into course material; if it is not, the quality of both teaching and learning will decline.

Higher education itself makes major contributions to the expansion of knowledge through its research activities. Obviously, there must be continued emphasis on the improvement of research and research facilities to assure the further expansion of what we know. But, equally important, faculty members must have access to new knowledge as it is developed and be able to make their own contributions, so that what they teach is always relevant and, thus, of high quality.

This means that faculty members must have opportunities from time to time for extended periods of research, study, or additional education. It also means that programs must be developed to continually change faculty environments and stimulate discussions with teachers from other institutions.

The General Assembly has approved a new policy on faculty leaves to assure this continuing professional development. **To further stimulate such development, the Board of Regents recommends that the legislature also provide funds to renew the Regents' Professorships and to recognize excellence in the university and college system. Funds for the Regents' Professors should be utilized to improve faculty performance through research or technical assistance support and not designed to provide extra compensation.**

The Board further recommends participation in the faculty exchange program established by the Ohio College Association. Colleges and universities should encourage faculty members to take advantage of this program by assisting with moving expenses or through other plans of support.

Quality and Funding

The important relationship between quality higher education and adequate funding was emphasized early in this chapter. But there is also another dimension to the funding issue which must be noted. That is the equally significant relationship between quality and institutional autonomy in the allocation of financial resources.

Charged as they are with prime responsibility for ensuring and improving quality, the individual colleges and universities must retain broad discretionary power in the area of fund allocation. The institutions and their boards of trustees are best equipped to distribute resources in a manner that will promote quality throughout the whole range of campus services.

This holds true for both public and private funds. The latter have been called "higher education's margin for excellence" and, with growing demands on public resources, there is an increased need to encourage private donations. These donations improve quality in many areas - providing academic scholarships, endowing professorships to retain top-flight faculty, supporting research projects, and financing other important educational services. But private giving is often designed to benefit specific institutions and can be discouraged if the state attempts to limit the discretion of individual colleges and universities in using this money. Therefore, local boards of trustees need to have total control over the allocation of privately-donated funds.

Overall, state agencies, both legislative and administrative, should exercise extreme caution in undertaking any action which might limit the authority of board of trustees to manage their own financial affairs. **The Board of Regents will continue to press for institutional discretion in the handling of funds. The Board also supports the continuation of private university foundations for the receipt of special gifts and grants and will work with the institutions to maintain continued tax deductible status for donors to universities and colleges.**

University and State Responsibility

Institutional autonomy in allocating funds is important to assure quality, but it carries with it a heavy responsibility. The financial pressures on colleges and universities are high and they will continue to increase, escalated by a diverse set of factors including changing enrollment patterns, demands for salary increases, competing demands for state resources, and growing energy costs, to name just a few. This means that institutions must be extremely careful in managing their resources and avoid the temptation to allocate and spend every revenue dollar. Flexibility must be built into budget procedures so that funds are available for innovation and for new and improved programs, both of which are necessary to improve the quality of higher education. **The Board of Regents recommends that each institution establish budget procedures which allow for the meeting of unforeseen circumstances, which set aside special money for innovation and new programming and which can provide for special opportunities where they exist.**

At the same time, it is clear that full responsibility for improving quality through innovation and new programming should not be borne by the individual colleges and universities. The state itself has a great stake in its system of higher education and a role to play in fostering both the innovation and cooperation necessary to ensure quality. Existing formula models through which the state provides support do not take this fully into account, with the result that opportunities to improve quality may slip by because adequate funds are not available at the right time. **Therefore, the Ohio Board of Regents will seek a special appropriation to provide money for innovation and system improvement grants. These grants should be available to state-assisted and independent institutions and consortia where the improvement of the system can be demonstrated and where commitments of future institutional funding can be shown.**

Interstate Reciprocity

Quality students can be an important factor in improving the quality of higher education. Thus it follows that the best interests of Ohio's colleges and universities are served by facilitating the entry of as many highly qualified students as possible, including students from other states.

Out-of-state students can be attracted to Ohio's institutions by carefully drawn reciprocity agreements which govern their admission and also assure equal benefits for Ohioans attending college in other states. With these agreements in force, Ohio would benefit from the ideas and abilities of quality students from outside our borders and also from the opportunities for Ohio residents to take advantage of special education programs offered in other states.

The Board of Regents favors action to attract out-of-state students to Ohio and recommends that the General Assembly pass legislation authorizing the Board to negotiate interstate reciprocity agreements with surrounding states. These agreements might include reciprocity in tuition payment or student aid, or the provision of special program opportunities.

CHAPTER VII

Lifelong Learning: Change and Challenge

Summary

The changing needs of society require changes in the way higher education serves people. Today, more and more people seek opportunities for continuing education at the college and university level, requiring higher education to provide Lifelong Learning programs.

Increasing numbers of adults want higher education to expand their intellectual horizons, upgrade their skills or prepare for entirely new careers. Blacks, women and the poor are turning to higher education as the avenue to greater opportunity and fulfillment. Many young people who drifted through or

dropped out of high school see the campuses as offering a second chance to gain much-needed skills.

Our colleges and universities must respond to this need for Lifelong Learning opportunities, making the necessary changes in programming and institutional commitment. They must view Lifelong Learning in its broadest sense, recognizing that it encompasses degree credit and non-credit instruction, full-time and part-time offerings for adult students, and on-campus and off-campus services for adults.

In seeking to enlarge their services to older adults and to part-time students, our institutions, particularly those serving commuting students, must assign this responsibility a high priority in the planning process. An Advisory Council on Lifelong Learning should be established to assist the individual campuses in this effort and to recommend state policies which will support the expansion of these services throughout Ohio. In addition, the Board of Regents recommends that the state give immediate encouragement to the recognizable work in this area already underway at state colleges and universities.

Thousands of students, including many adults, are presently being served through late afternoon, evening, and weekend credit courses; off-campus credit courses; and both degree-credit and non-credit conferences, seminars, workshops and institutes. To stimulate this activity and better meet the demand for Lifelong Learning, the Board of Regents recommends that:

Continuing attention be given to lowering barriers to part-time enrollment now posed by the inflexible scheduling of courses and by the disproportionately high fees charged for this type of service.

Continued encouragement be given to the development of off-campus degree credit instruction within procedures now in force.

The Advisory Council on Lifelong Learning study the pattern of degree credit conferences, seminars and similar offerings to determine if a better way of annualizing enrollment counts is needed.

The Advisory Council assist in developing guidelines by which the Board of Regents could selectively qualify occupationally oriented non-credit course offerings for subsidy earnings without requiring that specific degree credit be granted.

The Advisory Council suggest a procedure by which the state can promote a full range of non-credit educational services by helping fund the college offices responsible for their development and administration.

The Board of Regents also recommends continued support for Ohio State University's Agricultural Cooperative Extension Service and Labor Education Service, both outstanding Lifelong Learning programs. In the Health Personnel field, the Board urges strong state support for the development of programs of continuing professional education. And, in the area of credit instruction through correspondence, the Board recommends that state subsidy support be continued for and limited to the Ohio University program, currently the only one in the state.

Television is a powerful medium of education, particularly in the field of Lifelong Learning. The Board of Regents recommends continued state support for the evening hour transmitter operations of the Ohio Educational Television network. The Advisory Council on Lifelong Learning should make recommendations concerning the use of television outlets for organized instruction.

Record-keeping is essential to provide the information necessary for developing a quality Lifelong Learning system. The Advisory Council should make specific recommendations concerning record-keeping in the area of non-credit instruction and also recommend forms of information gathering and reporting for the overall field of Lifelong Learning.

Chapter VII

Dramatic changes in society are demanding some equally dramatic changes in the way higher education serves people.

Today, there is a crucial need for Lifelong Learning. More and more people, many well beyond traditional college age, are seeking opportunities for continuing education to expand their intellectual horizons, develop a better understanding of our society and its institutions, and gain new knowledge to enable them to cope with rapid change. Others, confronted by the growing complexity of technology, seek retraining to upgrade their skills or prepare for entirely new careers. Groups and individuals pressing for new options in society - blacks, women, the poor - look increasingly to education as their only door to greater opportunity and fulfillment. And many young people who drifted through or dropped out of high school are realizing their mistake and see higher education as a crucial second chance to gain much-needed skills.

These people - from all levels and of all ages - are turning to our colleges and universities for Lifelong Learning opportunities. This trend will continue, as the enrollment projections presented in Chapter II clearly indicate. And it is up to higher education to provide these opportunities; otherwise we face the threat of having large numbers of citizens permanently restricted in their ability to function and grow.

To meet this challenge, there must be some serious rethinking of educational objectives. The time is past when colleges and universities can narrowly view their contribution as something which takes place at a set and usually early stage of a student's life; now they must concern themselves with the much broader need for Lifelong Learning. This will mean change, specifically the creation of systems both accessible enough and flexible enough to accomodate the increasingly diverse groups of students who can benefit from higher education.

Clearly, there is an urgent social need for this kind of education. But, important also, the shift toward Lifelong Learning makes sense for the colleges and universities themselves. Faced with very serious economic pressures, they may, by providing effective services to new groups of students, especially adults, offset the expected decline in enrollments from younger age groups. In this way, higher education may escape a wrenching displacement of existing educational resources, and turn those valuable resources to the service of persons not now well served by Ohio's education system.

To succeed, Ohio's institutions will have to consider major changes in programming and in historical institutional commitments. They will have to adjust and adapt to the growing demand for Lifelong Learning if they are to warrant an important share of the adult-education market.

Right now this market is dominated by groups, agencies and institutions which lie outside the field of traditional higher education. As noted by the National Commission on Non-traditional Study, these outside mechanisms of adult education far outstrip our colleges and universities in total numbers of adults now served. In 1973, for example, American colleges and universities enrolled between 8 and 9 million degree students. But in the same year more than 32 million adults were served on a part-time basis by various industrial, military and governmental training agencies, secondary school systems, proprietary institutions, and a host of churches, social organizations and labor unions.

This contrast is not presented to suggest that higher education should expand its course offerings into every conceivable field and compete with all the other organizations involved in Lifelong Learning. Obviously, this is neither wise nor feasible. But with activity this widespread, colleges and universities will have to plan carefully and act with vigor to attract adult students to their own Lifelong Learning programs. They must be prepared to change to take advantage of change.

The Ohio Citizens' Task Force on Higher Education assigned great importance to Lifelong Learning. In its 1974 report, the Task Force urged the state to respond more effectively in this area, noting that Ohio has yet to embrace fully the concept of continuing and part-time education. Underscoring its position, the Task Force cited Lifelong Learning along with Equal Access and an emphasis on Excellence as its three paramount objectives for state policy guidance.

The Task Force report also went further, identifying a variety of factors which have inhibited the growth of continuing and part-time degree and non-degree programs at Ohio's colleges and universities. These include:

"For individuals: limited program offerings at a time convenient to most adults, high credit-hour costs, inadequate academic and career counseling, inflexible registration procedures, lockstep course arrangements, and tenuous commitment by institutions and their faculties."

"For institutions: no state subsidy for off-campus study, no state subsidy for non-credit courses, a faculty-administration mind-set geared to the traditional student, limited use of credit by examination, inadequate counseling staff, and budget pressures which thwart the new and the different."

These obstacles, which are not unique to Ohio, point up the changes which our system of higher education will have to consider if it wants to respond effectively to the growing need for Lifelong Learning. To move in this direction, colleges and universities increasingly should consider the needs of older adult students in fashioning whole programs of service, in addition to such service as is now or can be offered through individual courses or brief sequences of courses. They should also view Lifelong Learning in the broadest sense, recognizing that it encompasses degree-credit and non-credit instruction, full-time and part-time offerings designed for adult students, traditional and non-traditional instructional methodologies and program designs, and on-campus and off-campus services for adults. These are essential steps in attracting the new groups of students who need a flexible system of higher education.

It is important to emphasize that Ohio does not need a specialized statewide campus for Lifelong Learning. (Non-traditional or external degree). Our existing institutions have the resources and responsibility for this important assignment. The Board of Regents firmly believes that they must make the changes necessary to adapt to the demands for new and differing educational services.

The first step in this process is commitment. **The Board of Regents recommends that all colleges and universities seeking to enlarge their services to older adult students and to part-time students assign this matter a high priority within their established processes for academic planning and administration, and turn careful and systematic attention to the factors which inhibit the growth of services.**

Concurrent with activity by individual campuses, the State of Ohio in its support of higher education should also turn concentrated attention to this important area. **An Advisory Council on Lifelong Learning should be established to assist colleges and universities in focusing attention on expanded services to adults and to recommend state policies which support the broad development of these expanded services throughout Ohio.**

This council should serve in an advisory capacity to the Board of Regents. It should include carefully selected members from within the public and private colleges and universities and members with knowledge and experience in adult education from outside the traditional structures of higher education. The members drawn from within the colleges and universities should include both persons experienced in continuing education services already in operation and those involved in administration and planning for their respective institutions.

The Advisory Council can be an effective instrument for helping facilitate the transition to Lifelong Learning and new state policies may grow out of its studies. **But in addition to the Council's activities, the Board recommends that the state give immediate encouragement to the recognizable work in the adult/postsecondary education area which is already underway at state colleges and universities.**

It is important to emphasize this work. While it is true that Ohio has yet to respond fully to the need for Lifelong Learning, still much is being done that can provide a sound foundation for future development. Thousands of students, including large numbers of adults, are now being served through a wide variety of higher education programs designed to meet their specific needs. These programs, which are examined in the following sections, illustrate the scope of present efforts, the growing need for this type of service and its future potential. Included also are recommendations designed to help move Ohio along the road to a comprehensive system of Lifelong Learning opportunities.

Two notes in advance. First, it is true there have been no fully reliable surveys in this area of educational service. But in 1975 an important first step was taken to accumulate data and these figures are used in the following sections. Second, the figures reflect two measures of student activity. The total number of individual course registrations during a full year is used to best portray the overall activity within each category. Total course registrations for the year are then translated into their annual equivalent in full-time students, since most enrollment planning in Ohio is based on a full-time equivalent count representing fifteen credit hours of enrollment throughout a three-quarter academic year.

Late Afternoon, Evening, and Weekend Credit Courses

The survey reported by the Board of Regents in 1975 found within this part-time category more than 225,000 individual course registrations each year by public colleges and universities, with an additional 40,000 registrations by independent institutions. These individual course enrollments have an annual full-time equivalent of about 23,000 students in the state-assisted institutions and about

4,500 students in the independent sector. The enrollments encompass both young students recently out of high school and the older adults who are central to this discussion of Lifelong Learning. **The Board recommends that continuing attention be given to lowering barriers to part-time enrollment now posed by the inflexible scheduling of courses and by the disproportionately high fee charges for this type of service.**

Off-Campus Credit Courses

Substantial progress is being made to develop and coordinate off-campus instruction. Actions taken by the Board of Regents during 1975 have made such off-campus credit instruction eligible for state subsidy support within the constraints of institutional Off-Campus Instructional Plans. The Board of Regents' survey in 1975 found nearly 13,000 course registrations each year by public colleges and universities through off-campus credit offerings, with an additional 2,500 registrations by independent institutions. These individual course enrollments have an annual full-time equivalent of about 725 students in the state-assisted institutions and about 150 students in the independent sector. It should also be noted that the most recent report of off-campus enrollment by state-assisted colleges and universities shows full-time equivalent counts nearly double those reported above for the 1973-74 year.

The Board of Regents recommends that continued encouragement be given to the development of off-campus degree-credit instruction within procedures now in force. Careful and continuing attention should also be given to determining and providing appropriate levels of state support for off-campus instruction within the student-based formula through which state colleges and universities derive subsidy support.

At the same time, in encouraging the development of off-campus instructional services, the Board of Regents urges several constraints upon both state and independent institutions.

First, it is of utmost importance that off-campus offerings represent an *expansion* of service to Ohioans. They should not become the cause of a major diversion of regular students away from the permanent campuses.

Second, it is equally important that new services for adult students not result in the growth of additional permanent two-year, four-year or graduate campuses in Ohio.

Third, it is imperative that a level of academic quality comparable to on-campus instruction be assured in every instance where a course is taught away from a permanent campus.

Fourth, it is crucial that plans for the expansion of off-campus services seek the cooperation of other institutions whose interests and programs may be affected. To avoid conflict, stress should be placed on both state-level and local coordination among state and independent colleges and universities.

These constraints must be central to the planning of off-campus educational services. It is also important that methods be devised to assist in the mediation of difficulties which may arise out of the growth of off-campus services. In all such efforts at coordination, neighboring institutions should freely share plans and interests with each other and actively seek to avoid undue competition, while building cooperative arrangements which can provide new services for Ohio citizens. The State of Ohio itself should be actively involved in promoting this cooperative programming.

Degree-Credit Conferences, Seminars, Workshops, and Institutes

The survey reported by the Board of Regents in 1975 found in this area of part-time study nearly 10,000 course registrations each year by state-assisted colleges and universities, and 3,000 registrations by independent institutions. These individual enrollments have an annual full-time equivalent of about 500 students in public institutions and about 175 students in the independent sector.

At the present time, any degree-credit conference, seminar, workshop or institute conducted by a state-assisted institution is eligible for state subsidy support if it falls within either the summer or fall term counting period used for determining support, and if no external sponsor is underwriting the full instructional costs involved. **The pattern of such offerings throughout the academic year should be studied by the Advisory Council on Lifelong Learning to determine whether a more satisfactory method of annualizing enrollment counts is needed, or if present summer-plus-fall counting reasonably represents year-round activity in this area of service.**

Non-Credit Courses, Conferences, Seminars, Workshops, and Institutes

According to the same Board of Regents' survey, these non-credit offerings account for nearly 200,000 course registrations each year by state-assisted colleges and universities, with an additional 46,000 registrations by independent institutions. These individual enrollments have an annual full-time equivalent of about 7,000 students in the public institutions and about 700 students in the independent sector.

Of the non-credit instruction within the state-assisted colleges and universities, nearly 57 percent was in courses or other instructional settings having an occupational or professional purpose, 32 percent dealt with courses of a personal or general development nature, and 11 percent dealt with some type of community problem-solving.

The Board of Regents has found that within the Occupational and Professional category there are many occasions when a clear public purpose can be served by offering a particular sequence of courses outside of a degree program. In these sequences, the substance of instruction involved differs little from degree-credit programs except that a more limited purpose is served. But present policy creates difficulties in this area in terms of state subsidy payments. Larger institutions having well developed and diverse course inventories can offer such limited sequences to students simply by putting together a selection of degree-credit courses from existing offerings. In such cases, state subsidy is automatically earned because the courses involved were designed for use in degree programs.

However, in smaller institutions, especially two-year colleges, such existing courses may not be at hand, and service cannot be rendered with state support unless the college sets out to somehow encompass the new course offerings within a new associate-degree program. If this cannot be done, students must pay the full cost of the particular sequence.

A recent example which illustrates this problem is the legislative mandate that all persons seeking to gain or hold real-estate licenses in Ohio must complete a limited series of college-level courses within a given time period. This is a legitimate service of higher education and students should not have to bear the entire cost of the courses just because they are not part of a degree program. Instead, it would be desirable to approve such offerings for subsidy earnings even though no degree award is directly contemplated. It is possible, of course, that such work might subsequently be valued for credit purposes as applicable to a related degree program as elective courses, or upon transfer to another institution conducting a related degree program.

The Advisory Council on Lifelong Learning should assist in the development of guidelines by which the Board of Regents could selectively qualify such occupationally oriented course sequences for subsidy earnings without requiring that specific degree credit be granted.

As noted earlier, many non-credit course offerings fall outside the occupational and professional category; over 40 percent are concerned with personal or general development or with community problem-solving. The cost of these courses should be borne by the participants. But given the benefits which these programs offer to both individuals and communities, the state should promote a full range of non-credit educational services by helping fund the college offices responsible for their development and administration. **As part of its assignment, the Advisory Council will be asked to suggest a procedure through which this funding can be provided, with the state perhaps sharing the cost.** Under such an arrangement, the institutions perhaps would be required to set aside income from non-credit courses to be applied to the cost of these courses and their development.

Cooperative Extension Service

The outstanding historical example of state, county, and federal government commitment to Lifelong Learning is found in the support given over many years to the Agricultural Cooperative Extension Service of the Ohio State University.

The Extension Service deals not only with educational services to the agricultural industries and farm families, but with home management, nutrition, and a variety of local community problems such as zoning, land use, waste disposal, health and safety, and environmental improvement. It reports more than four milion individual contacts with youths and adults each year through a widespread network of extension centers and youth programs.

Continued support of this program is vital. The Advisory Council should examine the operations of the Cooperative Extension Service, drawing from its knowledge and

experience valuable information which can benefit the development of other programs in the field of Lifelong Learning.

Labor Education Service

Another example of soundly-based public support for Lifelong Learning is the Labor Education Service of the Ohio State University. Supported by special legislative appropriations over a number of years, this Service has provided valuable non-credit educational programs for Ohio's labor movement. With developmental and overhead costs borne by the state and direct instructional costs paid by supporting labor organizations, the Labor Education Service provides another possible model for other forms of non-credit adult education.

Continued support of this program is important and should be provided within the higher education operating budget during such time as separate encouragement is required.

Health Manpower Continuing Education

Strong state support for the development of programs for continuing professional education is critical for the whole range of health-related professions. Sound programs of continuing physician education during the period of active practice is not only crucial for upgrading knowledge and skills, but is also closely tied to Ohio's needs for achieving better geographical distribution of physicians and for attracting young physicians to an Ohio practice. Beyond this, in some of the health-related professions continued licensing now depends on the renewal of knowledge in mid-career through formal supplementary education.

Credit Instruction Through Correspondence

Among Ohio's colleges and universities only Ohio University currently offers instruction through correspondence. **Rather than duplicate a service which by its nature is accessible statewide, only the Ohio University program should receive state subsidy support. Ohio University is urged to make its correspondence program responsive to the needs of all colleges and universities in Ohio which are developing services for adults.**

Educational Television

Television is a powerful medium of education and Ohio should seek to realize its full potential.

Support for development of both credit and non-credit adult instruction rests within the fully operational Ohio Educational Television Network. Daytime programming in support of elementary and secondary-school programs is currently funded by the Department of Education. The evening-hour operation of university-linked transmitters presently is supported through higher education's state budget, although all programming costs, both public service and instructional, must be borne by the individual universities initiating such programming.

The Board of Regents recommends continued support for the evening-hour transmitter operations, and the Advisory Council on Lifelong Learning should carefully assess the potential value of television outlets for organized instruction and make recommendations concerning their use. A committee appointed by the Board of Regents is already conducting a study in this area. Note should also be made n this regard of the modest current state appropriations available to the Ohio Educational Television Network Commission for encouragement of program development, and of studies by the Commission to determine the role of educational television as it relates to statewide instructional broadcasting.

Improved Record Keeping

Essential to the full development and reasoned growth of a quality Lifelong Learning system is adequate record keeping to provide the information needed for present and future planning. **The Advisory Council on Lifelong Learning should make recommendations concerning use of the Continuing Education Unit for purposes of institutional record keeping in the fields of non-credit instruction. The Council should also make recommendations concerning the need for and the desirable forms of state-level information gathering and reporting in the overall field of Lifelong Learning.**

The growing demand for Lifelong Learning poses a challenge to our colleges and universities. It also raises some difficult questions which will have to be answered in the process of responding to this educational need. To what extent should the state be required to fund continuing education? Does it have a responsibility in some areas but not in others? Should all students benefit from state subsidies or just certain categories?

The basic issues embodied in these questions and others will have to be resolved through careful study and planning. Priorities will have to be set which take into account both the needs of traditional-age students and the newer groups seeking educational services. But, whatever the final determinations, Lifelong Learning is here to stay and it will be one of the major responsibilities of higher education in the years ahead.

CHAPTER VIII
The Future of Graduate Education

Summary

Ohio has a strong system of graduate education, offering opportunities for master's and doctoral level study in every region of the state. Comprehensive and adequate in terms of providing needed services, this system is one of the state's major educational resources.

Graduate education falls into two general categories. Practice-oriented programs prepare students for careers in such areas as business administration, social work, and teaching. Research-oriented programs are directed toward advanced research and scholarship, with many of their students looking toward careers in higher education. In the practice-oriented area, the Board of Regents strongly supports the development of high quality programs, chiefly at the master's level, in each section of the state, but stresses that proposals for new programs must be thoroughly justified. In the research-oriented area, given the broad range of existing programming, the Board expects that few new research-oriented graduate programs can be justified over the next several years.

Since many students in research-oriented graduate programs plan careers in higher education, the Board recommends that universities review these programs to see that they include appropriate opportunities for education in effective teaching techniques. The Board also supports current efforts to develop more opportunities outside the teaching profession for graduates of research-oriented programs.

At the heart of graduate education is research, which is an essential part of graduate work, especially at the doctoral level. The Board of Regents recommends that the state strengthen direct support of that research closely allied to graduate-level instruction in order to assure that Ohio will continually benefit from this vital function of the higher education system. Basic research done by our universities is often a crucial first step toward meeting the practical needs of society and this activity must be supported so that our universities can remain agents of progress. The state should also be sensitive to occasions when it can profit by giving special support to particular research efforts.

Primary responsibility for assuring the quality of graduate education rests with the individual universities and requires of them a careful study of their graduate programming. This must include the review and evaluation of both new and existing programs. Because of the importance of this process, each institution will be asked to submit to the Board of Regents its formal review procedure within one year. In addition, programs with very small enrollments will be identified and the universities asked to report on these programs on an individual basis.

Graduate education must be open to everyone who seeks and can benefit from it. But today access is still a problem for some groups, including Blacks and other minorities and women. The Board of Regents is committed to improving access for members of these groups and this should also be the goal of each university. The Board recommends that universities expand their efforts to identify and recruit women and minority students and that graduate schools make a more concentrated effort to provide counseling and other support services. Universities should also foster more convenient access to graduate education through part-time study and off-campus instruction, and should evaluate admission criteria to assure that qualified students have access to graduate programs. Recognizing

that financial constraints are also a barrier for underrepresented groups, the Board will ask its special committee on access to consider the question of financial aid for graduate students.

In planning for graduate education, personnel needs are a key factor. Most research today tends to agree that there is no major field nationally where in the next five years Ph.D. graduates will be in critically short supply. The Board of Regents believes that Ohio's current graduate programs are largely adequate to produce the needed graduate-trained personnel at the Ph.D. level over the next several years.

At the same time, changes in the graduate education structure will be necessary to adjust to market fluctuations or to meet specific local or regional needs. Circumstances may justify some new graduate programs, but in considering these programs the Board will stress the use of existing resources through consortia arrangements, inter-institutional sharing, or interdisciplinary programs. At the doctoral level, it is not likely the Board will approve a new degree unless it utilizes one or more of these arrangements.

Other changes in graduate education will be necessary to serve a newly-emerging clientele, which includes older students, fully-employed students, and part-time students. This will require flexibility in graduate programming. The Board of Regents fully supports this development, but cautions that any new programming proposed to meet the needs of non-traditional students will be expected to utilize existing resources, whenever feasible.

In common with all of higher education, graduate education faces serious financial problems. As costs increase, there is a strong possibility that a proportionate share of the increase will have to be passed on to the students, with an obvious negative impact on access, and that universities may have to consider a reduction in graduate programming.

To address the potential problem of increased costs for students, universities should develop better information about graduate students and their sources of funds and also cultivate other sources of financial assistance for both students and graduate education in general. The state for its part must assume responsibility for exploring the relationship between access and increased costs for graduate students, a task that will be undertaken by the Board's special committee on access.

The possibility that financial pressures may require contraction within graduate education poses a strong demand for institutional leadership, since the individual universities are in the best position to allocate resources. If a reduction in graduate programs becomes necessary, the Board strongly urges universities to utilize their review and evaluation procedures to identify areas where contraction is appropriate.

During the next biennium the Board of Regents will provide leadership and assistance in other areas related to the financing of graduate education. Working with the universities, it will explore ways to promote diversity and reward quality, ways in which resources can be shared, and finally ways in which the total cost of graduate education can be more adequately and accurately determined.

Chapter VIII

Graduate education is the capstone of the educational system. Our graduate schools are major resources, providing opportunities for advanced research and scholarship, upward mobility, and mid-career development. Many of our professional and academic leaders are shaped at the master's and doctoral levels, contributing through their post-baccalaureate study to the expansion of knowledge, to the formation of new concepts, and to the resolution of society's most pressing problems.

Ohio has a strong system of graduate education, characterized by increasing enrollment and quality programs. Enrollment has risen 23 percent in the past five years; this year alone, eleven state universities are serving over 37,000 students studying full or part-time in research and practice-oriented programs which include master's degree sequences, doctor of philosophy programs, and some programs of postdoctoral study. Nearly all of the state-assisted universities in which these students are enrolled have achieved the most advanced status conferred by the North Central Association of Colleges and Schools on the basis of program quality, resources, and responsible planning. The Association is the major accreditng group for our institutions.

In addition, approximately 13,000 graduate students are attending Ohio's independent colleges and universities. This enrollment figure reflects the importance of the independent sector as a source of graduate education.

The scope of graduate education in Ohio's state universities can be seen in the accompanying exhibits which show the distribution of programs by institution and geographic region. These exhibits include programs at every state institution and Case Western Reserve University with the exception of master's programs at Ohio State University, which, as the state's major research university, offers programs in almost every discipline.

Graduate education responds to a variety of needs. Some programs relate to national and international requirements for graduate-trained personnel and research, others to regional or local concerns or the internal needs of the universities themselves. Most serve a mixture of all these needs. Ohio has programs in every category, with opportunities for master's and doctoral level study in each region of the state. Some of our institutions also provide opportunities for postdoctoral education, a component of graduate education which provides an opportunity to obtain highly specialized training, usually with a particular faculty member, and also adds a broadening component to the education of other graduate students. Postdoctoral appointments are funded either through competitive fellowship programs or by research grants or contracts obtained by the faculty. The appointee is not a student or a member of the teaching staff, but participates as a colleague and associate in graduate education and research. The postdoctoral concept has become an integral part of higher education and should be recognized as an important service of our graduate programming.

This chapter reviews our system of graduate education, noting the issues which confront it and responding to those issues with a series of specific recommendations. It deals with all graduate programs normally organized within a university's graduate school and, therefore, excludes graduate/professional programs such as law, medicine, and dentistry.

In preparing this report, the Board of Regents reviewed the current literature on graduate education and also empaneled an *ad hoc* Graduate Program Policy Advisory Committee composed of representatives from public and private institutions, business, government, and out-of-state universities. The committee's study included extensive data-gathering and the solicitation of opinions from each of the state-assisted graduate universities.

Through the committee's work and other analyses of graduate education, five categories of policy issues are identified, all of them complex and challenging. They are the issues of Research, Program Quality, Access, Graduate-Trained Personnel and Finance.

Graduate Programs

Rational planning efforts must depend on an accurate understanding of the goals and objectives of graduate education. Broadly speaking, there are two major types of graduate programs. One is research oriented; the other is oriented to professional practice. *The Joint Statement on Accreditation of Graduate Work* of the Council of Graduate Schools, the Federation of Regional Accrediting Commissions of Higher Education, and the National Commission of Accrediting defines these programs as follows:

Practice-oriented graduate degree programs, where the primary objective is to train graduate students through the master's or doctor's level as preparation for professional practice directed mainly toward the application or transmission of existing knowledge, and completion of the program ordinarily is identified by award of the degree of Master of (Professional Field) or Doctor of (Professional Field), e.g., Master of Education (M.E.), Master of Business Administration (M.B.A.), Master of Social Work (M.S.W.), Master of Fine Arts (M.F.A.), Doctor of Arts (D.A.), Doctor of Musical Arts (D.M.A.), etc.

Research-oriented graduate degree programs, where the primary objective is to train graduate students through the master's and doctor's level as preparation for scholarly or research activity directed mainly toward the acquisition of new knowledge, and completion of the program ordinarily is identified by award of the degree of Master of Arts (M.A.), Master of Science (M.S.), or Doctor of Philosophy (Ph.D.), etc.

There are similarities between these programs. However, due to their distinct differences and intents, it is important that they be treated separately and titled appropriately as we look to the future of graduate education in the State of Ohio.

Master's Degree Programs

	1		2				3			4
Arts & Humanities	Bowling Green	Toledo	Akron	Kent	Cleve. St.	Youngstown	Miami	Wright	Cincinnati	Ohio University
Architecture				●			●		●	
City/Region. Plan.									●	
Art	●			●			●		●	●
Art History									●	●
Photography										●
Music	●		●	●	●	●	●	●	●	●
Theatre	●		●	●			●		●	●
Film	●									●
Classics		●							●	
Latin				●						
English	●	●	●	●	●	●	●	●	●	●
Linguistics										●
French	●	●	●	●			●			●
German	●	●		●			●		●	●
Spanish	●	●	●	●			●			●
Romance	●								●	●
Speech	●		●	●			●		●	●
Philosophy	●	●	●	●	●		●		●	●
Religion & Theology							●			
Education										
General	●	●	●		●		●		●	
Elementary	●	●	●	●		●	●	●	●	●
Secondary	●	●	●	●		●	●	●	●	●
Art Education		●		●			●	●	●	●
Music Education			●	●		●	●		●	●
Economic Education							●			●
Industrial Arts	●	●	●	●			●		●	●
Health/Phys. Ed.	●	●	●	●			●		●	●
Special Education	●	●	●	●		●	●	●	●	●
Educational Psych.	●	●	●				●		●	
Student Personnel	●	●	●	●		●	●	●		●
Educational Adm.	●	●	●			●	●	●	●	●
Specialist	●			●	○		●		●	●
Home Economics			●	●			●		●	●
Business Education	●	●						●		
Rehabilitation Coun.	●							●		
Educational Media	●						●			
Curr. & Instruc.	●	●					●	●	●	●
Personnel Counsel.								●		

○ *Sixth Year Educational Specialist Program*

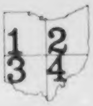
Master's Degree Programs

Social Sciences	1		2				3			4
	Bowling Green	Toledo	Akron	Kent	Cleve. St.	Youngstown	Miami	Wright	Cincinnati	Ohio University
Area/Internat'l Study										●
Urban Studies			●		●					
Amer. Studies	●									
Popular Culture	●									
Accounting	●	●	●	●						●
Management			●							
Bus. Adm.	●	●	●	●	●	●	●	●	●	●
Organizational Dev.	●									
Gen. Commun.			●						●	
Radio-TV	●			●			●			●
Journalism				●						●
Lib. Science		●		●						
Psychology	●	●	●	●	●		●		●	●
Public Adm.				●	●				●	
Social Work									●	
Anthropology				●			●		●	
Economics	●	●	●	●	●	●	●	●	●	●
History	●	●	●	●	●	●	●	●	●	●
Geography	●	●	●	●			●		●	●
Political Science	●	●	●	●			●		●	●
Sociology	●	●	●	●	●		●		●	●
Corrections	●			●						
Criminal Just.						●			●	
Social Sciences										●
Biological Sciences, Health Sciences, & Related Fields										
Biology	●	●	●	●	●	●		●	●	
Dev. Biology									●	
Botany							●			●
Zoology							●			●
Microbiology							●		●	●
Biochemistry										●
Anatomy									●	
Pathology									●	
Pharmacology		●							●	
Physiology									●	
Nursing									●	
Environmental Hlth.									●	
Speech/Spch. Path.	●		●	●	●		●		●	●
Hosp/Health Adm.									●	
Medical Specialties									●	
Biopharmaceuticals									●	
Pharmacy		●							●	
Bio-Medical Commun.									●	

Master's Degree Programs

Phys. Sciences and Engineering	1		2				3			4
	Bowling Green	Toledo	Akron	Kent	Cleve. St.	Youngstown	Miami	Wright	Cincinnati	Ohio University
Physics	●	●	●	●	●		●	●	●	●
Astronomy		●							●	
Chemistry	●	●	●	●	●	●	●	●	●	●
Chem. Physics				●						
Geology	●	●		●			●	●	●	●
Earth Science			●					●		
Mathematics	●	●	●	●	●	●	●	●	●	●
Computer/Info. Sci.	●							●		
Statistics	●		●				●			
Gen. Engineering		●	●							
Chem. Engineering		●	●		●				●	●
Civil Engineering		●	●		●	●			●	●
Elec. Engineering		●	●		●	●			●	●
Indus. Engineering		●			●					●
Mech. Engineering		●	●		●	●			●	●
Aerospace/Aeronaut.									●	
Aerospace Education							●			
Biomedical									●	
Mat'ls Engineering						●				
Systems Engineering								●		●
Metallurgical Eng.					●				●	
Nuclear Engineering									●	
Paper Technology							●			

Doctoral Degree Programs



Arts & Humanities	Ohio State	1	Bowling Green	Toledo	2	Case Western	Akron	Kent	Cleve.St.	Youngstown	3	Miami	Wright	Cincinnati	4	Ohio University
Art																
Art History	●					●										
Music	●					●		●				●		●		
Dramatic Arts																
Theatre	●					●		●								
Classics	●					●								●		
English	●		●	●		●		●				●		●		●
Linguistics	●															
Foreign Languages																
German	●					●								●		
Slavic & Eastern European	●															
Romance	●					●								●		
East Asian	●															
Speech	●		●			●		●								●
Philosophy	●					●								●		
Phys. Sciences & Engineering																
Physics	●			●		●		●				●		●		●
Astronomy	●					●								●		
Chemistry	●			●		●	●	●	●			●		●		●
Chemical Physics	●							●								
Geology	●					●						●		●		
Mathematics	●		●	●		●		●						●		●
Computer Inform. Science	●					●										
Statistics	●					●										
General Engineering				●			●		●							
Chemical Eng.	●					●								●		●
Civil Eng.	●					●								●		
Electrical Eng.	●					●								●		●
Industrial Eng.	●															
Mechanical Eng.	●					●								●		
Aerospace/Aeronautical	●					●								●		
Biomedical Eng.	●													●		
Systems Eng.	●					●										
Polymer Eng.						●										
Computer Eng.						●										
Agricultural Eng.	●															
Ceramic Eng.	●					●										
Mechanics Eng.	●					●										
Metallurgical Eng.	●					●								●		
Nuclear Eng.	●													●		
Macromolecular Eng.						●										

Doctoral Degree Programs

Biological Sciences Health Sciences & Related Fields

		1				2						3				4	
	Ohio State		Med. Coll. of Ohio	Bowling Green	Toledo		Case Western	Akron	Kent	Cleve. St.	Youngstown		Miami	Wright	Cincinnati		Ohio University
Agricultural Education	●																
Agronomy	●																
Animal Science	●																
Dairy Science	●																
Horticulture	●																
Poultry Science	●																
Agricul. Econ./Rural Soc.	●																
Biology				●	●		●		●	●					●		
Genetics	●																
Biometry	●						●										
Biophysics	●																
Environmental Biology	●																
Entomology	●																
Botany	●												●				●
Plant Pathology	●																
Zoology	●												●				●
Microbiology	●						●						●		●		●
Biochemistry	●						●								●		●
Anatomy	●						●								●		
Pathology	●						●								●		
Pharmacology	●						●								●		
Physiology	●						●								●		
Food Science	●																
Public Health																	
Preventive Medicine	●																
Environmental Health															●		
Speech & Speech Path.	●						●		●						●		●
Allied Health Services																	
Hospital & Health Admin.							●										
Veterinary Medicine Spec.	●																
Medical Specialities															●		
Pharmacy	●						●								●		
Medical Sciences			●														

Doctoral Degree Programs

Social Sciences & Education	Ohio State	1	Bowling Green	Toledo	2	Case Western	Akron	Kent	Cleve. St.	Youngstown	3	Miami	Wright	Cincinnati	4	Ohio University
American Studies						●										
Business & Mgmt.																
Accounting	●					●										
Operations Research	●					●										
Management						●										
Doctor of Business Admin.								●						●		
Communications	●															
Radio-TV																●
Journalism																●
Library Science						●										
Psychology	●		●	●		●	●	●				●		●		●
Public Administration	●															
Organizational Behavior	●					●										
Social Work	●															
Anthropology	●					●										
Economics	●					●						●		●		
History	●		●	●		●	●	●				●		●		●
Geography	●							●						●		
Political Science	●					●		●				●		●		
Sociology	●		●			●	●	●						●		
General Education	●			●		●		●						●		
Elementary Ed.	●						●									●
Secondary Ed.	●						●									●
Art Ed.	●															
Curriculum & Instruction	●			●		●		●				●		●		●
Industrial Arts	●													●		
Health & Physical Educ.	●			●				●						●		
Special Education	●					●		●						●		
Educational Psychology						●		●						●		
Student Personnel	●			●		●	●	●				●				●
Educational Administration	●		●	●			●	●				●		●		●
Home Economics	●													●		
Educational Foundations	●			●				●						●		

Practice-Oriented Programs

The emphasis in this category is on master's level work, with most students seeking degrees which are professional in nature. Most of these programs serve residents of the geographic areas of the institutions which offer them.

Large numbers of students are drawn to these graduate programs, many seeking job security and advancement in their individual professions through additional education. High-quality programs of this type are important for the state. They provide advanced education for elementary and secondary teachers, for people in state and local government agencies, and for managers in many of our industrial and business concerns. The availability of this graduate-level education can be crucial as professions become more demanding, mirroring the increasing complexity of society itself.

In providing this kind of graduate education, universities tend to develop close ties with the individual professions, mutually benefiting both the academic and nonacademic sectors. These ties are strengthened by the fact that in addition to meeting university standards, many practice-oriented programs are accredited by the appropriate professional societies. These programs of graduate education also offer opportunities for off-campus instruction which strengthen the relationship between universities and their communities.

The Board of Regents sees a continuing need for practice-oriented programs at the graduate level. **The Board strongly supports the development of high-quality, practice-oriented programs, chiefly at the master's level, in each section of the state in order to provide opportunities for professional advancement and lifelong learning. However, a university proposing a new practice-oriented program must be able to demonstrate that sufficient need exists to justify the commitment of faculty and facilities.**

The Board also believes that special attention must be given to the problem of named degrees awarded by practice-oriented programs. There has been a proliferation of degree titles, some of them not very specific. This has led to confusion in the graduate field. **Recognizing this as an ongoing problem, the Board recommends further study by graduate schools and associations to assure clarification of degree titles and their specific meanings.**

Practice-oriented programs offer an opportunity to better meet the educational demands of nontraditional students. Such programs may require a reevaluation of entrance criteria, program offerings, and exit criteria to provide access to citizens of the community who are not being served by the conventional M.A. and M.S. programs.

Research-Oriented Programs

Research-oriented programs at the graduate level differ to a great extent from those in the practice-oriented category. While the latter are concerned largely with advanced education leading to professional practice outside the universities, the former are oriented toward advanced research and scholarship and emphasize learning for the sake of knowledge. Approximately half of the students in these programs look toward careers in higher education. Most of the other half seek employment in industry, business, government, and nonprofit organizations.

These programs are of immeasurable value. It is here that we develop independent and creative scholars, who, in pursuing knowledge, enrich both our spiritual and material lives. Graduate-level faculty and students expand human understanding, help to define our society and the individual's place in it, and undertake the basic research which provides the foundation for progress in the arts, sciences, and humanities. In physics and chemistry laboratories and in biology and psychology departments, for example, the basic research is done that powers our technology.

Given these contributions, it is obvious that a state such as Ohio realizes great benefits from its research-oriented programs of graduate education. Ohio must continue to support essential programs, both for the benefit of students and in its own interest, but it must guard against unnecessary proliferation. **Considering the broad range of research-oriented programs now available in all regions of the state, the Board of Regents expects that few new research-oriented graduate programs can be justified over the next several years. Instead, the challenge in the next decade will be to develop the quality of the existing system.**

We are in an era where our society is desperate for solutions to the massive social, economic, and technological problems that characterize our present-day world. Our need for knowledge is insatiable, and we must ensure that people with the ability and inclination are given the opportunity to help meet that need.

To assure excellence in the years ahead, today's students must be well prepared for their role as tomorrow's teachers and leaders. **The Board of Regents recommends that universities review their graduate programs to see that they include appropriate opportunities for education in effective teaching techniques and teaching-learning processes. The Board also supports current efforts to develop more opportunities outside the teaching profession for graduates of research-oriented programs.**

Research

Research activities within Ohio's universities are an important and intrinsic part of graduate educational programs. The resultant training of graduate students and the expansion of the knowledge base, which is in itself a national resource, is important to society as a whole.

At the doctoral level, research is the heart of graduate education. The highest academic degree, the Doctor of Philosophy, is awarded only to those who have demonstrated the ability to conceive and carry out original research. Any university offering this degree has an obligation to provide the faculty, the facilities, and the appropriate support so that students may receive this training. Between one-third and one-half of the credit hours in a Ph.D. program are usually devoted to dissertation research. Research training requires teaching on a one-to-one basis. This is the most intensive type of education offered at the university and must be directed by a member of the faculty who is qualified by virtue of research interests and experience to teach students to do research in a given area. The state, through its doctoral-level formulas of subsidy, provides support for these activities. The major source of support for faculty research, however, consists of funds acquired by those faculty members from external sponsors, primarily the federal government, through nationwide competition.

Stimulated by research operating within educational programs, and in turn, stimulating and supporting the professional growth of graduate students and faculty, the funds provided by externally-sponsored faculty research are critical to the development of the community of scholarship which exists within a university. Ohio has a good record in this area, with three of its universities among the top 100 in the nation in terms of federally-sponsored research. Ohio State University ranks 21st; Case Western Reserve University, 34th; and the University of Cincinnati, 59th.

Basic research is like the foundation of a building. Its contribution may not be immediately apparent to the viewer, but it is the base on which the visible superstructure of application is built. Our universities traditionally concentrate their efforts primarily on basic research, while industrial organizations usually direct their research efforts toward applied research and the development of new materials, devices, systems, or methods. This is, effectively, a cooperative venture, with each participant playing an essential part. A recent report of the National Science Board points out that *basic* research increasingly contributes to technological innovation, and that such research, performed at universities, is most frequently cited as the origin of patented technological advances. The report goes on to note that there is indeed increasingly rapid utilization of basic research results in modern technology. Another recently available analysis of the generation of knowledge necessary for a number of advances in clinical medicine found that basic research pays off in terms of key discoveries almost twice as handsomely as all other types of research and development combined.

It is clear that basic research is the indispensible foundation stone on which our modern technology rests. Graduate students and faculty members working together at research-oriented universities are responsible for nearly all of the basic research done in this country. Thus, the social value of university-based research is great, and major dividends are returned to society by the investment of state funds.

In addition to providing continued direct support for research closely allied to graduate-level instruction and meaningful encouragement for the development of externally-sponsored research, the State of Ohio may, on occasion, profit greatly by special support of particular research efforts within our graduate-level universities. One such effort related to energy is discussed elsewhere in this Master Plan.

The Board of Regents recommends that the state strengthen direct support of that research closely allied to graduate-level instruction in order to assure that Ohio will continually benefit from this vital function of the higher educational system.

To date, there has been no ongoing systematic mechanism for bringing industrial problems and needs to the attention of academic research people, nor for making Ohio industry aware of the research and development capabilities that exist in our colleges and universities. It is essential as a first step to develop comprehensive information, and to establish a means of bringing together representatives from faculties, graduate schools, and industry. **Accordingly, the Ohio Board of Regents will appoint a research advisory committee comprised of members from faculties, graduate school administrations, and industry, to determine the present state of the research effort and capabilities in Ohio's institutions of higher education, and the adequacy of funding; to project future needs, and to acquaint industry and the academic community with each other's problems and capabilities; and to propose methods of securing needed financial support and other forms of assistance and encouragement for research.**

Program Quality

Assessing the quality of graduate education is a complex and challenging task, because individual programs pursue different objectives and the criteria for evaluation can vary a great deal. But, in the overall process, one thing is clear: the primary responsibility for quality control rests with each individual university.

The institutions themselves can best measure the quality of programs as they relate to the needs of the students and to the goals of the institutions, as they contribute to undergraduate instruction, and as they respond to particular local requirements. This necessitates a careful study by each university of its graduate programming, a critical assignment which will increase in importance as our institutions seek to maintain quality in the face of tightening budgetary constraints.

At the heart of this ongoing activity must be the process of program review and evaluation, which is fundamental to identifying and maintaining quality. This process has been utilized in Ohio, but never to its full extent. For example, there are regular review procedures for new graduate programs, but at the present time, only three of the eleven graduate institutions have in operation a formal review procedure for existing programs. Appropriate review procedures will lead to the discontinuation of unneeded or low-quality programs or to the modification, strengthening, or addition of other programs.

Effective planning and quality control, therefore, require review and evaluation of both new and existing graduate programs. Ohio's universities are aware of the growing importance of this process, and most are now working toward implementation of appropriate internal review procedures. While programs are reviewed by national and regional accrediting agencies for compliance with minimum standards, the internal review of graduate programs is intended to ensure the development and maintenance of graduate programs of the highest possible quality.

In its study of program review and evaluation, the *ad hoc* Graduate Program Policy Advisory Committee stressed institutional responsibility and also recommended a coordinating and monitoring role for the state. Following the committee's recommendations, the Board of Regents has adopted, largely from committee proposals, some principal criteria which should be included in a review procedure. They are:

1. *Quality of Faculty:* Measurements should include professional preparation and clinical experience of faculty; research productivity; teaching effectiveness; and level of participation in graduate instruction.
2. *Quality of Curriculum:* Is the program redefining itself in the context of contemporary changes? Are the courses appropriate?
3. *Quality of Students:* Measurements here should cover academic quality; the origin of students and the diversity of their backgrounds; and the effect of admission policies on retention rates. Admission policies also should be reviewed to make sure that standards set to assure quality take into account the total experience and background of the individual student.
4. *Adequacy of Resources:* Evaluation of laboratory, equipment and other physical facilities; library; supporting staff and services.
5. *Need for Program:* Level of student interest and demand; potential or projected enrollment; relation to institutional goals; fiscal and academic relationships between graduate and undergraduate programs; societal demands; intellectual development and personal fulfillment; potential for cooperative program development; employment opportunities.
6. *Productivity:* Evaluation of resources available and utilized; management capability; marketplace needs; research benefits and the program's

relationship to institutional objectives. In addition, productivity measurement should include a comparison with similar programs at other institutions.

The above criteria reflect the Board of Regents' commitment to meaningful review and evaluation. While recognizing that the individual institutions must play the major role in this process, the Board is conscious of its own responsibility to assure quality by requiring the development of review procedures. **Therefore, each institution will be asked to submit to the Board its formal review procedure within one year. In addition, programs with very small enrollments will be identified and the universities asked to report on these programs on an individual basis. At the Ph.D. level, outside consultants may be called in to assist in review procedures.** Note should be taken that the requirements dealing with small programs stem primarily from a concern for quality, although cost is also a factor.

Traditionally, the Board of Regents has been involved in review and evaluation through its authority to approve new degrees and degree programs. It is also charged to "recommend . . . programs which could be eliminated because they constitute unnecessary duplication or for other good and sufficient cause." In spelling out the above requirements, the Board is acting in the belief that a more active role has been mandated for it in this important quality control procedure. In this broader role, the Board will assist universities in developing frameworks to facilitate the use of review and evaluation, to monitor the quality of the institutions' self-evaluation programs, and to ensure that self-evaluation is considered in the broader context of state needs.

Student Survey

While program review by peers and experts in a given field can probably best measure program quality, the opinions of those who have been served by the state's graduate education system also provide important information on the perceived quality of that system. An opinion survey sent to the 1972-1975 Ph.D. graduates of Ohio universities produced some extremely encouraging comments about the state of education in Ohio:

*84 percent of those responding thought their graduate program was either good or excellent.

*93 percent felt their program was one of the best in the state.

*89 percent thought that overall facilities were adequate.

*80 percent thought the overall quality of teaching was either good or excellent.

Access

A quality system of graduate education should be open to everyone who seeks and can benefit from post-baccalaureate study, not just to those with financial and social advantages. As the primary source from which professional and other leaders are drawn, it should assure men and women from every level and sector of society an opportunity to seek these leadership roles. However, in Ohio, as elsewhere, access to graduate study is still a problem for some groups.

The Ohio Board of Regents is committed to improving access to graduate education for groups of students traditionally excluded or underrepresented. This should also be the goal of each state institution. While it is clear that all of the problems connected with access cannot be solved at the graduate level, there is still a great deal that can be done by our graduate institutions. They must take the kind of affirmative action that not only guarantees equally qualified individuals an opportunity to pursue advanced study unimpeded by ethnic, socioeconomic, sex or age barriers, but also encourages underrepresented groups to expand their interests.

Blacks and other minorities are seriously underrepresented in our graduate institutions, a situation which results from educational tradition, their financial status, the lack of substantial undergraduate pools, inadequate preparation in undergraduate programs, and the absence of a supportive environment.

Women have access problems, too, with their participation in higher education declining as one moves up the academic ladder. Women graduate students also tend to be concentrated in the humanities and education, with very few enrolled in the physical sciences, engineering, or social sciences such as economics. Along with Blacks and other minorities, women are frequently discouraged from pursuing graduate education because of the lack of role models. In addition, women have also been disadvantaged in the past by unequal access to financial aid and jobs, and in some instances, by unequal treatment as students.

Access can also be a problem for non-traditional graduate students, including adults who postponed graduate study, professionals seeking to upgrade or renew skills, and part-time students who must pursue their studies at intervals. Financial pressures, particularly those resulting from family obligations, can present a barrier for these people, as can course sequences, residence regulations and other institutional requirements which may be difficult for non-traditional students to fulfill.

As a first major step toward improving access for these groups, the Board of Regents recommends that universities expand their efforts to develop and utilize procedures for the identification and recruitment of women and minority students. All avenues should be explored with special emphasis on programs designed to assure early identification of capable students at the undergraduate or even high school level.

Adequate counseling is also an important factor in improving access. **The Board recommends that graduate schools make a more concentrated effort to provide the counseling and other student support services that will assist women, minority, and non-traditional students in becoming oriented to graduate education.** These services might include personal, academic, and financial counseling, as well as developmental opportunities and greater placement assistance. There are some departments in which long-term enrollment patterns seem to imply systematic discouragement of the minority and non-traditional student. The graduate schools should look for these practices and should encourage their change.

It is recognized that individual institutions are responsible for ensuring that their graduate programs are of the highest possible quality. At the same time, some features of high-quality degree programs may impose barriers to access, particularly for working students who seek to upgrade or renew skills, primarily on a part-time basis. For example, the residence requirement mandates that all candidates for the Ph.D. degree complete a certain number of quarters (usually one academic year) enrolled as full-time students. This may impose heavy financial burdens and other constraints for the working student. **The Board of Regents recommends that each institution explore alternate ways of ensuring the competence of their graduates which will preserve the integrity of degrees while at the same time lowering barriers to students seeking a Ph.D.**

While assuring the quality of graduate programs is the most important consideration in developing admission standards, care should be taken not to erect unnecessary barriers. **The Board recommends that graduate schools evaluate admission criteria in terms of their appropriateness to program goals so that qualified students are assured of access to graduate programs.**

Universities should also foster more convenient access to graduate education by expanding the opportunities for part-time study and by putting students in closer proximity to graduate study through off-campus instruction. But, in making this recommendation, the Board of Regents stresses that care must be exercised in the development of off-campus instruction and that it must be subject to the constraints cited in Chapter VII under "Off-Campus Credit Courses."

In making these recommendations to individual institutions, the Board is well aware that a commitment to improving access must also exist at the state level and that programs for the recruitment of women and minorities will require the support of state government. **Recognizing that financial constraints are a major barrier, the Special Committee on Access which the Board intends to empanel during the next biennium will consider financial assistance for graduate students as it analyzes the budgetary priorities involved in promoting improved access.**

A final, serious problem in addressing the issue of access to graduate education is the limited amount of accurate data on the subject. More reliable data on the sex, race, and ethnic origin of graduate students and degree recipients is essential for assessing the situation. A reliable system of information concerning graduate education must be developed in the years immediately ahead through the cooperative efforts of the Board of Regents and the individual universities.

Ultimately, our success in assuring equality of access to graduate education depends on our overall success in assuring access to all segments of the educational system. As related in Chapter V, the Ohio Board of Regents will continue to work toward that goal throughout all of higher education.

Graduate-Trained Personnel

In recent years a great deal has been written about the overproduction of graduate degree holders, particularly at the Ph.D. level. The most recent report to cite this problem is the 1976 Carnegie Foundation study on higher education which noted that "surplus capacity clearly exists nationally in the production of Ph.D.'s," and listed Ohio as one of the states which "may wish to determine whether their Ph.D. offerings are now excessive." The availability of positions for Ph.D. graduates in almost all disciplines exhibits cyclical fluctuations when viewed over extended periods of time. These fluctuations cause difficult problems especially for those already embarked on a program. Data show, however, that universities and students do adjust over time to these changing employment opportunities.

Although graduate-trained personnel projections have often proved to be inadequate and current projections vary a great deal, most of the research tends to agree that nationally there is no major field where, in the next five years, Ph.D. graduates will be in critically short supply. Obviously, there will be continuing fluctuations within the academic and non-academic markets, requiring new adjustments and responses. The market response itself will, in many cases, take care of adjustments, as has been the case in education over the last several years. In fields leading to academic employment, the Board of Regents recognizes that the ability to make adjustments depends on greater knowledge and understanding of the determinants of non-academic employment, and will assist universities in developing better data in this area.

Considering existing factors, the Board of Regents believes that Ohio's current graduate programs are largely adequate to produce the needed graduate-trained personnel at the Ph.D. level over the next several years.

The Board also recognizes that change or adjustment may be necessary at the graduate level to respond to a specific need in a given geographic area. For example, the emerging need for new research in a commercial sector may lead to the development of a program along the lines of the polymer science program at the University of Akron. Future market fluctuations are likely to create circumstances where new programs can be justified on the basis of local or regional requirements. **However, in considering such programs, the Board of Regents will stress the use of existing graduate resources through regional or interstate consortia arrangements, interinstitutional sharing, or interdisciplinary programs. At the doctoral level, it is not likely the Board will approve a new degree unless it utilizes one or more of these arrangements.**

The Ph.D. programs being developed for the new medical schools, such as the ones at Kent State University in cooperation with the Northeastern Ohio Universities College of Medicine and at Wright State University in cooperation with Miami University are perceived as falling within the category of those which can be approved.

In the years ahead, changes in graduate education will also be necessary to accomodate a newly emerging clientele. There are new groups of people who are seeking and can benefit from graduate level study; they include older students, fully-employed students, and part-time students, who will require more flexible study arrangements than traditional programs now offer. Adjustments will be necessary to provide this new clientele with opportunities for graduate education. **The Board of Regents fully supports such changes, but cautions that any new programming proposed to meet the needs of nontraditional students will be expected to utilize existing resources whenever feasible.**

Financing

Graduate education, in common with all of higher education, faces serious problems generated by rapidly rising costs and the increased competition from other sectors for a share of public resources. These financial pressures are especially critical because graduate education stands second only to medicine as the most expensive area of higher education.

Graduate education in the 1960s grew under the impetus of federal grants for students, for research, and for support of selected institutional programs considered to be in the national interest. During this same period, the states also assumed sizable obligations, providing funding for the basic operation of institutions, constructing facilities, and paying faculty salaries. In addition, students paid a share of the cost for graduate education through tuition, although in many cases this was limited because many students received federal fellowship and traineeship support. With the federal government assuming a more restricted role, this situation has changed. Federal support for graduate students has been drastically reduced. As the growth in federal aid for basic research has continued at a modest rate, priorities have changed and probably will continue to fluctuate. This makes planning difficult and thrusts greater responsibilities on the state, individual institutions, and graduate students.

Reviewing this change and the broader financial outlook in Ohio, two critical issues are immediately apparent. The first involves the strong possibility that a proportionate share of the increased cost may have to be passed on to the students. The second issue involves the likelihood that universities, confronted by serious budget problems, may have to re-evaluate their priorities. This may lead to the phasing out of some graduate programs. Neither of these issues is very palatable for graduate education, but both must be taken into account in future financial planning.

A rise in student tuition rates would be bound to have a negative effect on graduate education, although the impact would vary depending on the composition of a given student body. Graduate departments with a high percentage of graduate students receiving some kind of stipend would be affected differently than those with large numbers of students paying their own way. The latter departments would be much more likely to experience reduced enrollment. Tuition increases would also be likely to affect the enrollment of part-time students, although the possible impact in this area is difficult to measure since there are no data indicating how many of these students receive outside support.

But however much experience may vary from institution to institution, it is clear that an increase in cost to graduate students is undesirable from the point of view of access. It would doubtless mean that some capable and highly motivated students would be denied post-baccalaureate education, resulting in the waste of their potential talent and loss of the contributions they could make to society.

The Board of Regents sees a need to address this potential problem in three different ways. **First, it is crucial to develop better information about our graduate students and the sources from which they obtain funds.** This task would fall mainly to the institutions and is essential for the development of sound financial policy. **Second, the individual universities must also take a lead role in exploring and cultivating other sources of funding for graduate students and graduate education in general.** They should seek more substantial contributions from business, industry, professional societies, and philanthropic organizations, and pursue federal research grants more vigorously. **Third, the state must assume responsibility for exploring the relationship between access and increased costs for graduate students.** As noted in a previous section, this task will be undertaken by the Special Committee on Access which the Board will empanel during the next biennium.

The second major issue, involving possible contraction within graduate education, also poses a strong demand for institutional leadership. Admittedly, this will be a very difficult process, given the close and crucial relationships between graduate education, undergraduate education, research, and the established commitments in both personnel and resources. But if financial pressures force this approach, the very complexity of the task argues for institutional action, since the individual universities are in the best position to determine the allocation of limited resources. **If a reduction in graduate programs becomes necessary, the Board of Regents strongly urges universities to utilize the review and evaluation procedures discussed earlier in this chapter to identify areas where contraction is appropriate.**

Beyond these issues, the Board of Regents sees other areas concerned with the financing of graduate education where it can work to help strengthen the graduate sector by providing leadership and assistance. **During the next biennium, the Board will seek the assistance of the institutions in exploring ways in which the state can promote diversity and reward quality in graduate programming, ways in which resources can be shared both within the state and through the use of interstate agreements, and finally ways in which the total cost of graduate education can be more adequately and accurately determined.**

CHAPTER IX
Planning for Health Personnel Education

Summary

Health Personnel education is the fastest growing sector of higher education, with enrollment increases in the various health science fields ranging from 100 to 300 percent over the past five years. This expansion has been a response to unmet health needs. But, after several years of unparalleled growth, interest is outstripping need in some fields and the Board of Regents faces a difficult assignment. It must recommend orderly expansion of some health education programs and limited enrollment in several others.

In the area of medical education, Ohio is in a position to educate an adequate number of physicians. Therefore, the Board recommends there be no further expansion of medical schools beyond what has been planned and that no additional medical graduates be planned above the level of the expected enrollment by 1985.

A major problem in medical education is assuring an adequate number of primary care physicians, including those in family medicine, general internal medicine, and pediatrics. While Ohio will be educating enough physicians in the years ahead, it is at present confronted by a shortage of doctors in the primary care fields. To help resolve this problem, the state's three new medical schools at Northeastern Ohio Universities, Ohio University, and Wright State University were founded to place their principle emphasis on primary care medical education. The Board of Regents recommends that these medical schools continue to emphasize primary care education and that family practice programs continue to be categorically supported, with an increase in funds, over the next two biennia.

Contributing to the shortage of primary care physicians is Ohio's low retention rate for medical school graduates and the maldistribution of physicians. Adding primary care residency programs can help overcome both problems. The Board recommends that such residency programs associated with the medical schools be established throughout Ohio and partially supported by state funds. The Board of Regents also recommends that a medical-student loan program be established with a forgiveness provision for practice in underserved areas of the state. With loans available to facilitate access, medical student tuition should be increased during the two biennia following creation of the loan program.

The student loan program is also needed to attract disadvantaged students to our medical schools. In addition, the Board recommends that specific financial support be provided to medical schools to initiate special recruitment and development programs for minority and rural students who are traditionally underrepresented.

Ohio's existing dental education facilities are adequate and the Board of Regents recommends that no additional dental school or college be developed. However, the problems of retention of graduates and maldistribution are also present in the field of dental care. The Board recommends that a program be initiated to increase retention and improve distribution and that this include a pilot post-D.D.S. education program in northwestern Ohio. If this program is effective it should be expanded to other areas of the state. The Board also recommends initiation of a dental-student loan program, with incentives for practice in Ohio, particularly in underserved areas, and supports expanded use of dental auxiliary personnel. The Board further recognizes the need to review the overall manpower situation and will continue to study the supply and quality of dental personnel.

A sufficient number of nurses are now being educated in Ohio. But stronger efforts must be made to assure nursing graduates opportunities for upward mobility. The Board of Regents recommends that upward mobility nursing programs be established or expanded in the state's six health manpower education regions so that qualified licensed associate degree or diploma nurses can obtain a bachelor's degree in a formalized higher education program. To assure the same type of opportunity for baccalaureate degree nursing graduates, the Board further recommends that a master's degree program in nursing be supported or established in each of the health manpower regions.

The Board is aware that concern has been expressed about the adequacy of clinical skills among academically-educated nurses. There is a need to address this concern and the Board will establish an advisory committee to examine the clinical component of the academic programs.

The Board recommends continued support for the one-year licensed practical nurse programs in Ohio. It also recommends that articulation be established between these one-year programs and the associate-degree programs of higher education.

In the fields of allied health, pharmacy, optometry and veterinary medicine, the Board plans further evaluation of existing education programs so that present efforts can be measured against future needs for services. Studies of pharmacy and veterinary medical education are presently underway and similar studies will soon be initiated in the optometry and allied health fields. The conclusions drawn by these studies will guide the Board of Regents in shaping specific recommendations.

Chapter IX

Health care is the fastest growing sector of the U.S. economy and health personnel education the fastest growing sector of higher education. Students are turning to the health sciences in impressive numbers, motivated by interest and the increasing opportunities in some of the health fields. Further accelerating this trend has been the strong support for expansion coming from both public and private sources, especially the federal government, which has played a major role in stimulating enrollment.

In Ohio, this growth has been explosive. Over the past five years undergraduate enrollment in the health sciences at our universities has increased 100 percent; the two-year colleges have experienced a 300 percent rise; and there has been similar rapid growth in graduate and graduate-professional enrollments.

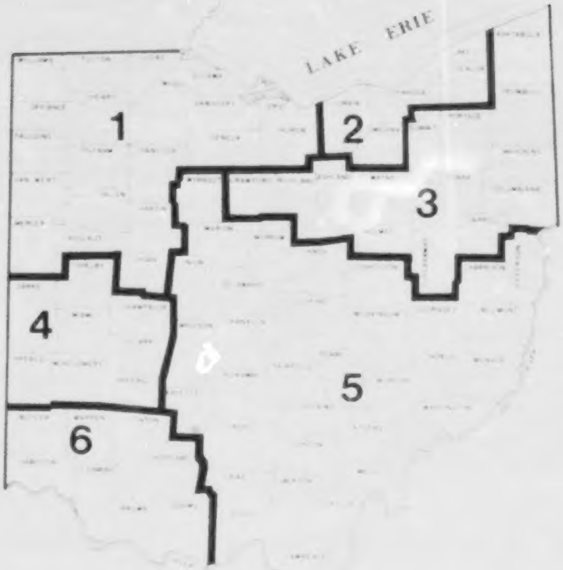
The expansion of manpower production has been a response to unmet needs in the area of health care and has been necessary to assure an adequate supply of health care professionals. But, after several years of unparalleled growth, the situation is changing and interest is now outstripping need, with the number of students applying for entrance into the health sciences exceeding the number of positions available in some fields. Nationally, for example, some 20 percent of the undergraduate students in colleges and universities have indicated a preference for the health professions.

In Ohio, the percentage stands at approximately the same level. This is an excessive number, well above what is needed for an effective health care system. To admit all of these students to health education programs could lead to a serious oversupply of professionals in many fields. It would also sharply increase the cost of health care education, sending it to a level that might far exceed available state resources. By way of illustration, if Ohio's seven medical schools were to enroll another 25 students per class, 700 additional full-time-equivalent students would enter at an immediate cost to the state of $5 million. And this figure does not include the additional support that would be needed for clinical teaching facilities or reflect the potential need for additional construction.

In the present situation, the Ohio Board of Regents faces a difficult and sometimes unpopular assignment. It must recommend orderly expansion of some health education programs and limited enrollment in several others. To make the right decisions in each case and assure enough, but not too many graduates, there must be careful planning which takes into account both statewide and regional needs.

The Board's approach to this planning process has been to develop six health manpower education regions in Ohio (see map). Five of these regions include one medical school and its health science center as well as a variety of other health science education programs. Region 5, by far the largest, has two medical schools, the Ohio State University College of Medicine and the Ohio University College of Osteopathic Medicine. This area has been developed as a single region to facilitate cooperation between these two major universities in developing appropriate health science education programs and to foster a similar cooperative effort in the delivery of health services throughout central and southeastern Ohio. To promote this cooperation, the Medical Microwave System has been established, a two-way audio-visual communications system which now links the Ohio State University College of Medicine, O'Bleness Hospital in Athens, and Holzer Medical Center in Gallipolis. This system will be expanded

Health Manpower Education Regions



to include Ohio University's College of Osteopathic Medicine, Doctor's Osteopathic Hospital in Columbus, and other hospitals and mental health institutions in Ohio.

In the future, developments in the southeast may warrant it becoming a seventh health manpower education region, but the present potential for cooperation in Region 5 makes it inadvisable to consider dividing the area at this time.

The regional concept of health manpower education and health care delivery was developed through discussions with professional groups, directors of health science education programs, the deans of medical schools, administrators of the universities and colleges, and allied health professionals. There is strong consensus among authorities at the local, state and federal levels that this is a highly effective approach. The same concept is embodied in federal legislation which established Health Systems Agencies (HSA's) across the nation. Ten such HSA districts have been set up in Ohio and the six health manpower education regions created by the Board of Regents have been carefully drawn to avoid dividing any of these districts. Ohio's regional design offers many advantages. These include:

1. Inter-institutional planning and cooperation to avoid the unnecessary duplication of health care programs.
2. The development of a planning mechanism linking health personnel production and utilization with the resources to achieve goals in these areas.
3. Development of coordination in the use of clinical facilities among all of the health personnel education programs.
4. A mechanism for the coordination of primary care residency programs (family medicine, general internal medicine and general pediatrics) among the medical schools, their health science centers and community hospitals and clinics.
5. Coordination of continuing education programs on a regional basis to respond to the needs of all health care professionals in the area. Many regulatory agencies and legislative enactments mandate this education; physicians, for example, are required by Ohio law to have 150 credits of continuing education every three years.

Through these cooperative efforts, the health manpower education regions can match personnel production with personnel needs. In addition, they can also facilitate the geographic distribution of physicians and other health care professionals.

As Ohio moves to fully implement its regional system, planners must also deal with another critical issue, the high costs of health personnel education. These costs are taking an increasing share of the higher education budget, largely because health science education programs involve clinical experiences which require intensive supervision by faculty members. Ohio, along with other states, is also incurring additional costs as many hospitals phase out their health science education programs and higher education, with public support, assumes an increasing responsibility for these programs. Overall, the cost of health personnel education will continue to rise, and to sustain quality in this vital area it will be necessary to expand financial support.

The commitment of adequate financial resources is important at all levels and especially in the area of research. Graduate programs in all other fields of higher education are associated with very active research endeavors and this must be true in the health fields as well. There is a crucial need to sustain high quality programs of medical and health research.

The value of these programs lies not only in the enormous contributions they make to the improvement of health care, but also in the close relationship between research and health personnel education. Many research programs involve students as part of the research team, providing them with valuable experience and knowledge which can be applied to patient care delivery. Viewed from this perspective, it is clear that research is an integral component of the educational process and essential to assure quality in all programs of health personnel education.

Ohio's present research efforts include programs in the fields of heart and lung disease, cancer, and infant care, which are largely supported by federally-funded research grants. There are also programs of research on kidney dialysis, nutrition, and prenatal patient education, as well as projects developed to investigate such areas as health service delivery, manpower utilization, and cost control. This second group of programs draws support from federal, state, and private resources, as do many other research efforts. These programs are making and will continue to make important contributions to health care and the health care system in Ohio.

The six health manpower education regions developed by the Ohio Board of Regents are specifically designed to assure that quality research programs are part of the overall educational process. Perhaps most important, they establish a viable structure for inter-institutional cooperation in both research and education within and between the regions.

Considerable work has already been done which points up the value of this cooperative approach. Inter-institutional research has led to the development of the Ohio Regional Medical Audio-Visual Consortium for the sharing and developing of instructional materials; it has resulted in the development of cooperative efforts to reduce the cost and unnecessary duplication of computer-assisted instruction programs; and it has led to utilization by the Ohio Department of Health of medical school health science centers and affiliated hospitals in six major areas (Akron, Cincinnati, Cleveland, Columbus, Dayton and Toledo) for the establishment of programs in maternal and child health.

Other areas of activity hold equal promise. Research has shown the advantages of a statewide network of Area Health Education Centers (AHEC), affiliated with existing medical schools and communities to provide training sites and programs for students in all the health sciences. In the field of emergency medical services, which involves the training of paramedics, inter-institutional research involving the health manpower education regions will faciliate cooperation in determining the number and location of these educational programs in relation to Ohio's needs. And there are continuing opportunities for inter-institutional cooperation in the area of cancer research, education and patient care as a result of Ohio State University's status as one of the nation's major cancer research centers.

Significantly, the research and program implementation associated with all of the above noted areas has been federally funded. This indicates another major advantage of quality research programs, which is their ability to attract federal money both for research itself and for the projects which may grow out of the research findings. Federal support is particularly critical today as the cost of health personnel education continues to rise. Ohio is attracting federal funds now and by emphasizing a regional and inter-institutional approach to health sciences research, it is helping assure continued funding in the future. In its own activities, the Board of Regents will continue to promote this cooperative approach in all health personnel education programs as an important means of securing federal research grants.

Medical Education

Ohio's system of medical schools has nearly doubled in size over the past five years. In 1971, there were two state medical schools, the Ohio State University College of Medicine and the newly-developing Medical College of Ohio at Toledo. The state also provided assistance to the colleges of medicine at independent Case Western Reserve University and the then municipal University of Cincinnati.

Since then, the Ohio General Assembly has created three new medical schools, the Wright State University School of Medicine in Dayton, the Ohio University College of Osteopathic Medicine in Athens, and the Northeastern Ohio Universities College of Medicine in the Akron-Canton-Kent-Youngstown area.

With these resources, Ohio is in a position to educate an adequate supply of physicians to meet the state's health care needs in the years ahead. By the 1980s, the state will be producing the number of graduates recommended by both state and national groups, including the 1969 Surgeon General's consulting group and the Carnegie Commission on Higher Education. These recommendations, based on Ohio's percentage of total U.S. population, put the state's "fair share" of medical admissions at 850 a year. The state will meet and exceed that figure by 1980, as shown in Exhibit 1, which indicates the present planned admissions at our seven medical schools.

EXHIBIT 1

Planned Admissions at Medical Schools

YEAR	CWR UNIV	UNIV CINC	OHIO STATE	MCOT	WRIGHT STATE	N.E. OHIO UNIV	OHIO UNIV	TOTAL
1970	121	117	182	32	—	—	—	452
1975	159	192	227	96	—	—	—	674
1980	168	192	240	150	85	60	48	943
1985	168	192	240	150	100	100	100	1,050

These admission figures represent an increase of over 100 percent in medical school admissions, up from 452 in 1970 to 1,050 in 1985. With this rise there will be an accompanying increase in the cost of medical education; by 1985, the expenditures necessary to provide Ohio with an adequate number of physicians are expected to be double the present level. As shown in Exhibit 2, these increases will involve both the state subsidy for student support and the state subsidy for clinical teaching facilities, and are directly related to rising student enrollments.

EXHIBIT 2

Increases in State Subsidy Support

Year	Student Admissions	Enrollment	State Subsidy Student Support	State Subsidy for Clinical Facilities
1970	452	1,916	$ 11,400,000	$ 8,200,000
1975	674	2,607	$ 25,700,000	$ 17,000,000
1980	943	3,600	$ 44,780,000	$ 25,800,000
1985	1,050	4,200	$ 59,690,000	$ 33,600,000

The projected subsidy costs for clinical teaching facilities take into account the expansion of facilities at the Ohio State University, the University of Cincinnati, and the Medical College of Ohio, as well as the needs of the three new medical schools. In addition, the General Assembly authorized in the 1975-77 biennial budget the capital expenditure of $23.8 million for the ambulatory facilities clinics at Wright State University and the Northeastern Ohio Universities College of Medicine.

These levels of enrollment and expenditure are fully adequate for Ohio. **The Board of Regents recommends there be no further expansion of medical schools beyond what has been planned and that no additional medical graduates be planned above the level of the expected enrollment by 1985**.

This does not mean, however, that Ohio is entirely without problems as far as medical care is concerned. Even though medical enrollment is increasing, the state is still confronted by a shortage of primary care physicians, who include those in family medicine, general internal medicine, and pediatrics. In part this results from the fact that the full impact of our rising enrollments will not be felt for some time; it will be six to eight years before many of the new students complete their education and begin practice. But other factors also have contributed to the shortage and must be dealt with to assure enough primary care physicians to meet our needs.

Two major causes of the shortage are rooted in the patterns of interest and support which have characterized medical education for a number of years. Over the past decade, there has been increasing interest in subspeciality medicine, with the surgical fields and such areas as cardiology, gastrology, and endocrinology attracting large numbers of students. This interest has been stimulated by the sizable federal support available for these programs, which has stood in sharp contrast with the low levels of support available for primary care programs from both the state and federal levels. Further complicating the problem has been a slowness to recognize the growing need for primary care physicians.

Fortunately, Ohio has now realized the implications of this shortage and is beginning to respond. The three new medical schools created by the General Assembly have been specifically charged with placing principle emphasis on primary care medical education. And, in 1974, the General Assembly passed legislation mandating the development of departments of family practice at all state medical schools.

This emphasis on primary care medicine must be sustained. **The Ohio Board of Regents recommends that family practice programs continue to be categorically supported for at least the next two biennia and that funds be increased to better reflect the need for family practice physicians.**

The Board further recommends that the three new medical schools at Northeastern Ohio Universities, Ohio University, and Wright State University continue to pursue the goal of medical education in primary medical care. Consistent with the legislative intent is the development of these medical schools without university hospitals and with faculty and curriculum oriented to primary care education.

Two other factors contributing to Ohio's shortage of primary care physicians are the state's failure to retain large numbers of its medical school graduates (the retention rate is less than 50 percent) and the maldistribution of physicians which results in poor access to medical care for many Ohio citizens. Both of these issues are closely related to the availability of primary care residency programs in Ohio. Studies show that graduates who complete their residency programs in the same state in which they attend medical school have a greater than 75 percent chance of remaining in that state to practice. In addition, the majority of physicians practice within a 50-mile radius of the location of their residency program. Thus, these programs are clearly a key factor both in retaining medical school graduates and in assuring wider distribution of physicians.

Ohio's medical schools have been responding to the problems of retention and distribution by developing programs in which medical students receive part of their education in communities throughout the state. It is felt that many students will return to those communities to practice after graduation. Outreach by the schools has been largely in the areas surrounding the individual institutions and supports the development of a regional concept of medical education for students.

This community-level approach is one effective means of dealing with retention and distribution. But there must also be other approaches, chief among them a broadening and strengthening of Ohio's primary care residency programs. **The Board of Regents recommends that medical residency programs in primary care associated with the medical schools be established on a regional basis throughout Ohio and that they be partially supported by state funds.** Through this action, the Board believes Ohio can make substantial progress in overcoming its shortage of primary care physicians.

To further address the problem of distribution, the Board recommends that a medical-student loan program be established with a forgiveness provision for practice in underserved areas of the state. Such a program should be established to improve access for students without regard to financial means. The Board also recommends that medical student tuition be increased during the two biennia following creation of the student loan program. It is the Board's view that medical students should be responsible for a greater percentage of medical education costs.

It is essential that the student loan program be established before tuition is increased. Otherwise, the cost of attending medical school will loom as an insurmountable barrier to many students, especially those from disadvantaged backgrounds who lack financial resources of their own. If loan money is not available, students in the latter group will be cut off from access to our medical schools.

In addition, steps should be taken to encourage the entry of minority and rural students, many of whom lack information about the opportunities for a medical career. Often, these students are handicapped by inadequate counseling, receiving neither encouragement nor assistance in determining the entrance requirements for medical school. As a result, they may fail to take the appropriate coursework at the high school or undergraduate level.

Ohio's medical schools should develop programs to increase awareness and understanding of their admission process among minority and rural students, so that lack of information is eliminated as a handicap. They should also actively seek such students. **The Ohio Board of Regents recommends that specific financial support be provided to medical schools to initiate special recruitment and development programs for minority and rural students. This effort may involve the development of special programs aimed at reaching students in the high schools and at the undergraduate college level.**

Dental Education

A 1973 study by an Ohio Board of Regents advisory committee explored the feasibility of establishing a school of dentistry at the Medical College of Ohio at Toledo. From its in-depth study the advisory committee concluded that Ohio's existing dental education facilities are adequate, but that in the area of dental care the state is confronted by two of the same problems which exist in the medical care field.

The first of these is our low retention of graduates. Ohio has the largest dental school in the nation and ranks third among metropolitan states in the number of dentists graduated per capita. But only 30 to 40 percent of the dental graduates of the Ohio State University and Case Western Reserve University remain in the state to practice. Compounding this problem is the second one, which involves a maldistribution of dentists (based on dentist to population ratio) among the various regions of the state.

In its study of dental manpower and dental care needs, the advisory committee made specific recommendations to deal with these problems which were accepted by the Board of Regents and incorporated in this Master Plan.

The Board of Regents recommends that no additional dental school or college be developed, but instead a program be initiated to increase retention of the state's dental graduates.

The Board further recommends that the General Assembly support a pilot post-D.D.S. education program in the northwestern area of the state at the Medical College of Ohio in Toledo. If this program is effective in improving the geographic distribution of dentists in northwestern Ohio and the retention of dental graduates, the Board recommends it be expanded and that additional post-D.D.S. programs be established in Athens, Cincinnati, Dayton, and the northeastern area.

The Board also recommends that a dental-student loan program be initiated with financial incentives for the practice of dentistry in Ohio and with additional incentives to encourage practice in underserved areas of the state.

The Board of Regents advisory committee pointed up the need for continued and expanded use of dental auxiliary personnel to assist dentists in the delivery of oral health care. **The Board of Regents supports the expanded use of auxiliary personnel and recommends the continued development of educational programs for dentists throughout Ohio to encourage the use of dental hygienists and dental laboratory technicians. It is further recommended that the educational and training programs for dental auxiliary personnel be continued in cooperation with dental societies, dental schools in the state system, and other public higher education. The Board also recognizes the need for an ongoing review of the overall manpower situation and will continue to study the supply and quality of dental personnel at all levels.**

Nursing Education

Nursing education is another health personnel area where Ohio has experienced major growth. In the past ten years, there has been a substantial increase in the number of Associate Degree (A.D.), Baccalaureate Degree (B.S.), and Master's Degree (M.S.) nursing graduates, as well as significant growth in the number of licensed practical nurse programs and graduates. A comparison between 1964 and 1974 is drawn in Exhibit 3, which shows a decrease only in the number of diploma graduates from hospital programs.

EXHIBIT 3

Nursing Programs and Graduates

	1964	
	Programs	Graduates
A.D.	1	55
Dipl.	51	2,925
B.S.	6	325
L.P.N.	29	1,081
TOTAL		4,386
Graduate	3	55

	1974	
	Programs	Graduates
A.D.	24	1,244
Dipl.	35	2,075
B.S.	11	701
L.P.N.	42	2,237
TOTAL		6,257
Graduate	3	83

Rising enrollments over the past decade are meeting state needs as projected in the 1964 report of the Ohio State Nursing Association to the Board of Regents. Ohio is now graduating a sufficient number of nurses in both the basic registered nurse and practical nurse programs.

A further study of nursing personnel needs was undertaken in 1973 by the Ohio Commission on Nursing at the request of the Director of Health. The Commission examined nursing needs and resources and, in September, 1975, issued a report in which the Board of Regents participated. A key section of the report dealt with education and research in nursing, identifying a need for continued study of the role that nurses play as part of the health care team. The report made specific proposals for changes in nursing education. These proposals are presently being studied so that specific recommendations can be made for their implementation.

The Ohio Board of Regents recognizes that the nursing profession is in the process of evaluating its future roles and responsibilities. In this assessment, it is of critical importance to recognize that nursing education programs must respond to the varying needs of hospitals, nursing homes, practitioners' offices, public health systems, industry and school systems. It is because of these diverse needs that the Board of Regents has supported three different access routes to becoming a registered nurse in Ohio. These include the bachelor of science degree nursing programs (the traditional four-year undergraduate programs referred to as "generic"), the two-year associate degree programs, and the diploma programs.

The first of these, the four-year undergraduate sequence, provides an educational program which can lead students into such specialized areas of nursing as administration, education, and clinical training. These opportunities are not available through associate or diploma programs of nursing education. It is important, therefore, that graduates from these latter programs have the opportunity for further career development by being able to enter baccalaureate programs at a later date. Such career mobility is possible when colleges and universities develop specific individualized programs for the registered nurse who wishes to acquire a bachelor of science degree in nursing. **The Board of Regents recommends that upward mobility nursing programs be established or expanded so that qualified licensed associate degree or diploma nurses have the opportunity to obtain a bachelor's degree in nursing in a formalized higher education program. The development of these programs (referred to as "articulated" programs) should be of such quality as to permit national accreditation.**

In order to provide access for students to baccalaureate programs, the Ohio Board of Regents recommends that each of the six health manpower education regions in Ohio should have at least one program with major emphasis on upward mobility through an articulated curriculum as well as generic baccalaureate programs.

Upward mobility is also important for graduates of baccalaureate programs. The Ohio Nursing Commission study called for the development and expansion of master's degree programs in Ohio to meet needs in specialized administrative and clinical areas and to foster the development of qualified faculty for nursing education programs. **Responding to this proposal, the Board of Regents recommends that a master's degree program in nursing be supported or established in each of the six health manpower regions of Ohio. In the development of these programs, all bachelor of science degree nursing program graduates, whether from articulated or generic curriculums, should have access to master's degree programs on the basis of individual capabilities. To implement this proposal, the Ohio Board of Regents further recommends that:**

a. A master's degree program in nursing be established in Northeast Ohio between the University of Akron and Kent State University. It is further recommended that Youngstown State University join this consortium at the appropriate time in the development.

b. A master's degree program in nursing be established as a cooperative venture between Miami University and Wright State University.

c. The Medical College of Ohio at Toledo develop a master's degree program in nursing as a consortium with Bowling Green State University and the University of Toledo.

As the nursing profession continues to evaluate its personnel and educational needs, another aspect of nursing education demands careful study. This relates to the growing tendency to move diploma programs into the formal academic setting.

As a result, there has been a continuing decrease in the number of diploma programs and an increase in the associate-degree and baccalaureate-degree programs. As this trend has developed the Board of Regents has become aware of the concern expressed by employers that academically-educated nurses may not have clinical skills adequate or appropriate for their duties. While some of the criticism may result from a failure to recognize the changing roles of the baccalaureate nurse graduate, there still is a need to address this concern. **The Board of Regents will, therefore, establish an advisory committee to examine the clinical components of academic programs as they relate to future employment responsibilities of their graduates.**

Another question raised in connection with nursing education concerns the appropriateness of the one-year licensed practical nurse programs. These programs provide access to the nursing profession for thousands of students, many from lower-income groups, and respond to public service needs which have not been met by licensed registered nurses. There has been some criticism of the graduates of practical nursing programs, but much of it has resulted from the utilization of these graduates in roles for which they have not been trained. Many times, the licensed practical nurse has been called upon to assume duties which should be those of the graduate of a diploma, associate-degree or baccalaureate-degree program. This inappropriate use of LPN graduates does not reflect on the value of the LPN programs, which do an effective job of educating nurses for specific health care duties. **Therefore, the Board of Regents recommends continued support for the one-year licensed practical nurse programs in Ohio. In addition, to improve career opportunities for the licensed practical nurse, the Board recommends that articulation be established between these one-year programs and the associate-degree programs of higher education.**

Allied Health

The concept of the "health care team" has become a reality through the education of large numbers of allied health professionals. Increasingly today, the highly specialized physician in internal medicine or in surgery is supported by occupational therapists and technicians, respiratory therapists and technicians, registered nurses, licensed practical nurses, medical secretaries and medical record technicians. This expanded use of allied health professionals is also evident in the field of primary medical care and results from the development of nurse practitioners and physicians' assistant programs.

In Ohio, major expansion in the allied health fields during the early 1970s has been in baccalaureate and associate-degree programs. We are now seeing a leveling-off in the number of baccalaureate and graduate degree students but a continued development of allied health science programs to serve students seeking associate degrees. Future expansion in the allied health field will most likely take place at the associate-degree level, with students enrolled in programs that are more highly specialized, but of shorter duration. A majority of these associate-degree graduates will be channeled into helping meet regional health care needs, with some responding to specific state or national requirements.

The most important aspect of Ohio's two and four-year programs in the allied health fields is that they are designed to complement one another in the development of needed health personnel. Baccalaureate-level programs supply the technologists who both direct and supervise the technicians graduated from associate-degree programs, and this interrelationship assures high standards of professionalism in the delivery of health care services. In addition, many programs at the baccalaureate and associate-degree levels involve cooperative efforts between the educational institutions and health care facilities, another factor which contributes to their quality and effectiveness.

The allied health professionals who are educated in Ohio's programs make valuable contributions in every area of health care - medicine, dentistry, pharmacy, optometry, and nursing. For that reason, the development and expansion of the allied health professions must not be viewed narrowly or in an isolated setting, but as an integral part of planning for the entire health personnel education system. **Consistent with this need, the Board of Regents recommends establishment of an allied health advisory board to study the allied health field and make recommendations to the Regents concerning program review and public health care needs.**

Pharmacy Education

Pharmacy education has undergone a significant change over the past twenty-five years. The prepackaging and prepreparation of medications has altered the responsibilities of the pharmacist, who today is seldom called upon to compound medications. As a result, pharmacy education programs are now designed to educate pharmacists for a broader role; they stress drug interaction and patient understanding and, at the same time, reflect the growing need for clinical pharmacy in hospitals and ambulatory health care facilities. This new program orientation results in increasing contact with patients in both hospital and non-hospital settings and expands the role of the pharmacist as a member of the health care team.

Ohio's four colleges of pharmacy - Ohio Northern University, University of Cincinnati, Ohio State University, and the University of Toledo - now graduate approximately 400 students each year who are eligible for licensing in Ohio. **This assures an adequate supply for the future, given the changing role of the pharmacist, and the Board of Regents sees no need for increasing the number of pharmacy graduates in Ohio.**

At present, the Board of Regents is examining the status of pharmacy assistant and pharmacy technician programs in the allied health field. These programs educate allied health professionals who can dispense medication under the supervision of a licensed pharmacist. As of now, the Board lacks sufficient information to determine if there is a need for additional associate-degree programs in this area and further study will be required before recommendations can be made.

Optometry

The College of Optometry at the Ohio State University is one of twelve in the nation which produce the optometrists who provide vision care to the public. A limited number of optometry graduates enter graduate programs and later become educators and researchers in optometry and vision science. **Ohio holds a strong position in this field of health care and while some expansion of enrollment at the OSU College of Optometry is desirable, the Board of Regents sees no need for an additional optometry program in the state.**

There are two optometric assisting programs (Columbus Technical Institute and Michael J. Owens Technical College) and one opthalmic dispensing program (Cuyahoga Community College) in Ohio. These two-year programs provide graduates who assist optometrists and ophthalmologists in eye care and the fabricating and dispensing of eye glasses. The two-year optometric programs will be evaluated to assure adequate utilization of graduates as well as to provide information as to the need for additional programs in the future.

Veterinary Medicine

Veterinary medicine is one of the most important components of the health care field. Veterinarians provide essential health services for the nation's livestock industry - a billion-dollar-a-year industry in Ohio alone - and for the vast numbers of people who keep domestic pets. The demand for these services is increasing in both sectors and there is a clear need for additional practitioners. In Ohio, some expansion of veterinary medical education appears necessary to assure access to adequate health care services for large and small animal owners alike.

Ohio State University has the state's only College of Veterinary Medicine, and it is one of only twenty in the nation. At present Ohio State enrolls 130 students each year, with about 30 of these being accepted from other states through contractual arrangements. As in some other areas of health care, Ohio has a problem retaining its veterinary graduates; the state's present retention rate is approximately 45 percent.

The task of assuring adequate veterinary services in Ohio is a complex one involving questions relating to enrollment levels, the possible need for an expansion of facilities, the retention problem, and numerous related concerns. All of these questions are now being studied by a Board of Regents advisory committee on veterinary medical education, which is charged with reporting on the status of veterinary medicine in Ohio. In its study, the committee will examine the need for additional veterinary medicine graduates and also the possible need for specific animal technician programs to educate veterinary medicine assistants. In addition, it will address itself to education programs for the practicing farmer and future farmer, study the role of interstate cooperation in the development of a veterinary medical education program, and assess present practices in the light of public need and utilization.

Because this study has not been completed, specific recommendations for veterinary medical education cannot be made in this Master Plan. The Board of Regents advisory committee will conclude the study in January, 1977, and the Board will utilize its report in making recommendations at that time.

CHAPTER X
Financing Higher Education

Summary

The financing of higher education is a complex process, with funds coming from many sources, including state, federal and local governments, student fees and charges, and private gifts and grants. During the 1974-75 fiscal year the state of Ohio provided 36.6 percent of all money for current operations in the areas of instruction and general operations, separately budgeted research, and public services. The state also funds the Ohio Instructional Grants program and has provided two-thirds of all physical facilities at the colleges and universities.

In the category of instruction and general operations (60% of the total college and university spending) more than 95 percent of the funding comes from state subsidy support and the instructional fees paid by students. The student-based formulas of support used for state funding of colleges and universities are based on expenditure patterns within this category of operations.

State support is limited in the research and public service categories, with most funding coming from other sources, including the federal government, the private sector, and users of particular services. The Board of Regents recommends that present funding policies in these categories be continued, except in special instances where the state may benefit by providing direct aid for specific activities. The Board also recommends continuation of the present policies for funding student assistance programs, except in cases where the state may identify objectives best served through direct institutional support.

The operation of auxiliary services on our campuses - residence and dining halls, student unions, and similar services - is generally expected to be supported by direct user-based student charges, generated income, and the General Fee charged to all students. In addition, the colleges and universities are authorized to undertake short and long-term debt for the construction of auxiliary service facilities. The Board of Regents recommends continuation of the present policies for financing auxiliary services, except as very special problems may dictate otherwise. The clear separation of responsibility for the financing of academic plant and auxiliary plant between the state and the boards of trustees should also be continued.

As they near the end of a period of major growth, Ohio's colleges and universities are, for the most part, in sound condition. But the years ahead are certain to bring increased stress as the decline in enrollment of traditional-age students, demands for new types of programs, and other factors create greater financial pressures. These challenges will require skillful management to maintain the financial strength of our institutions.

One area which demands special attention involves the long-term debt for residence and dining halls and other auxiliary facilities which institutions incurred during the growth period. The Board of Regents urges all university boards of trustees to examine closely the implications of possible full-time enrollment decline on the debt retirement burdens borne by their institutions, and to be especially cautious in undertaking new programs of debt.

Overall, the challenges of the planning period ahead impose major responsibilities on our institutions and the state itself. The colleges and universities will have to exercise strong and determined management, establish budgeting mechanisms which assure flexibility, and maintain effective mechanisms of cost control. They should also consider accumulating and sustaining an unbudgeted operating reserve, defend the revenue base for instructional purposes against erosion, devise methods to forecast longer term financial crisis, and devise strategies for responding to substantial enrollment change. To assist our

institutions during this period, continued importance should be placed on preserving their freedom to manage various funds independent of external controls so that maximum flexibility is possible.

State responsibility must include assuring the freedom of institutions to budget internally, set the level of the general fee and other special purpose fees, and manage their own affairs. The state should also continue to update expenditure models each year and should carefully relate appropriations to the costs associated with legislative decisions other than those provided for within the expenditure models.

In developing operating budgets for our institutions, the Board of Regents recommends that the present generalized process for determining needed student-based appropriation support be continued, with stress placed upon inter-institutional consultation during successive budget periods. The Board also strongly urges that the maximum instructional fee be limited by the General Assembly each budget session as an integral part of the appropriation process. In addition, some flexibility should be provided by the General Assembly so that the Board of Regents can make equitable redistribution of available unearned appropriations after actual enrollments are known.

Increased operating support will be needed in the years ahead simply to fund higher education's existing commitments. This will be necessary to offset the impact of inflation and other strong financial pressures, including those related to changes in enrollment patterns. Beyond this, implementation of Master Plan recommendations in the areas of access, lifelong learning, quality improvement, health personnel education, and coordination and planning would require further sizable increases in the level of state support. The Board of Regents recognizes that it is unlikely all of these recommendations could be funded at one time. In preparing budget proposals for the system, the Board will present its estimates of the costs of initiating each program at a beginning level and also consider the important element of timing in introducing proposals for change.

Capital improvement needs must also be considered in evaluating the future financing of higher education. With full-time enrollments expected to stabilize or decline after 1980, capital improvements associated with anticipated growth should generally be undertaken with great caution. Only when enrollment growth prospects can be persuasively defended should such construction be considered and, even then, institutions should first fully explore every possibility for utilizing existing space.

Another concern related to capital improvements involves the growing burden of debt service on the higher education budget. The Board of Regents strongly recommends that the increased encroachment of debt service demands upon higher education's operating appropriations be halted, and that future capital appropriations from this funding arrangement be limited.

The financial resources available to higher education as it moves into a period of change will be determined in large measure by the level and allocation of state funds. The Board of Regents believes that every effort should be made to clarify for the Governor and members of the General Assembly the need for higher education to move in new directions and to stress the urgency of sustaining existing programs and service commitments. In these matters the Board will work closely with state budget officials and with legislative committees through established budget processes of formulation and review.

If it becomes necessary to operate the higher education program within a lower level of state funding than is implied in this Master Plan, attention must be given to relative priorities. In this regard, it is strongly urged that past inclinations in the budgeting review process to reject out of hand all new programs in the interest of sustaining all existing programs and service commitments be resisted as out of keeping with sound planning. The Board of Regents also believes that in dealing with possible funding constraints, state colleges and universities must recognize the crucial need to keep student fees as low as possible to promote access.

In addition, institutions should respond to this situation with acts of self-help. These should include a strong follow-up to recommendations of the recent Management

Improvement Program, the review of all degree programs as part of the cost control process, and a cautious approach to new locally financed capital construction. The institutions should also consider selected limitation of access to high-cost health education programs, review the fee levels for other high-cost professional programs, study the impact of fee increases for all students, and weigh the advantages and disadvantages of limiting enrollment to levels of available state funding. Finally, they should continue to nurture financial support from non-governmental sources.

Skillful institutional management and state support of that management will be needed over the next two decades. In addition, because of the urgent need to address the issue of severe enrollment dislocation in the years ahead, an ongoing Planning Council should be established to serve in an advisory capacity to the Board of Regents and Ohio's colleges and universities. This Council should be charged with focusing attention on the implications of current enrollment projections and on their clear relationship to the major planning issues set out in this Master Plan.

Chapter X

Colleges and universities are complex financial enterprises. This fact reflects both the varied purposes to which institutions of higher education are committed and the varied sponsors who contribute to their support. During the 1974-75 fiscal year Ohio's state colleges and universities, including the Ohio Agricultural Research and Development Center, expended funds for current operations as follows for their principal functions:

	MILLIONS	
Instruction and General Operations	$ 605.8	59.9%
Separately Budgeted Research	59.3	5.9
Public Services	164.2	16.2
Student Assistance	27.6	2.7
Auxiliary Services	154.1	15.3
	$1,011.0	100.0%

Funds to support these expenditures were derived from various categories of sponsorship as follows:

	MILLIONS	
State Government	$ 370.0	36.6%
Federal and Local Government	122.5	12.1
Student Fees and Charges	279.4	27.6
Private Gifts and Grants	35.0	3.5
Generated Income	204.1	20.2
	$1,011.0	100.0%

The state government as a sponsor supported 36.6 percent of all spending for current operations, and distributed that support directly to various college and university functions in the following way:

	MILLIONS	
Instruction and General Operations	$ 337.9	91.3%
Separately Budgeted Research	8.5	2.3
Public Services	23.6	6.4
*Student Assistance	-0-	-0-
Auxiliary Services	-0-	-0-
	$ 370.0	100.0%

*Excludes annual appropriations made by the legislature for Ohio Instructional Grants, which are made directly to students rather than through the individual colleges and universities.

In addition to sponsorship of current activities the State of Ohio has been the major sponsor of capital construction programs of colleges and universities. It is estimated that the state government has provided two-thirds of all physical facilities. Since 1963 a total of $1.1 billion has been appropriated by the state for the construction, renovation, and improvement of higher education academic and administrative facilities. This does not include dormitories, dining halls, and other non-academic facilities which have been constructed with long-term borrowing supported by specific pledges of institutionally generated income. The state government's annual payment on the long-term borrowing for academic and support facilities was $50 million for the 1974-75 year, including payments on both revenue bonds and general receipts bonds of the state. These payments, when combined with the current operating subsidies provided by tax support, result in the state as a sponsor bearing approximately 40 percent of all college and university spending.

Over many years, certain patterns of sponsorship have developed among the major college and university functions, and consideration of state government support can best proceed in the context of these several functions.

Instruction and General Operations

The Instructional and General Operations category, representing about 60 percent of total college and university spending for current operations, includes all of the teaching, unsponsored research and scholarship, and support activities associated with the various teaching departments, along with college and university-wide activities which support the instructional functions: libraries, computer centers, student services activities, institutional administrative offices, and operation of the physical plant. It is to this broad category of largely instructional and instruction-related activities that the state has given its principal sponsorship.

More than 95 percent of all spending for this category comes either from state subsidy support or from instructional fees paid by students. The remaining five percent comes from a variety of private gifts or grants, miscellaneous student charges, and generated income of various departmental activities. A notable exception to this pattern exists in the receipt of local tax income by the several community colleges, which in substantial measure is utilized to offset income foregone through establishment of low levels of student fee charges for residents of the local taxing district. Beyond this, significant amounts of operating support are received by the two-year colleges from the federal government for support of technical education programs.

The student-based formulas of support used for state funding of the state colleges and universities are based on expenditure patterns within this category of operations.

Separately Budgeted Research

Except for that faculty research supported within teaching department budgets and graduate student research closely associated with the instructional function, research within a university or college is usually budgeted separately and derives its principal support from external, non-state sponsors. Federal government grants and contracts, foundation grants, and private grants and contracts represent 75 percent of the funds supporting these research activities. While the state provides the capital plant utilized in most research, it has limited direct support of research primarily to the work of the Ohio Agricultural Research and Development Center.

The research facilities and programs of Ohio's colleges and universities are major resources for the state. Through both basic and applied research, they address the whole range of public issues, making important contributions to scientific and technical progress, economic development, and the resolution of social problems. Support for this broad research capacity is an important part of higher education's financial structure.

The Board of Regents will from time to time identify and recommend support for research activities which will make a direct and unique contribution to resolving problems of importance to the state. The present policies for funding research should be continued and at the same time a systematic effort should be made to discover additional sources of support.

Public Services

Colleges and universities presently support a wide variety of activities generally of a public service character, although most such activities are related to the instructional and research functions of the institutions as well. These activities include the operation of hospitals and clinics associated with medical schools or with individual teaching departments, radio and televison stations, institutes and workshops designed for non-credit instruction, the Ohio Cooperative Extension Service, the Labor Education and Research Service, and laboratory schools. Generally, in all activities wherein a public service is rendered in conjunction with college and university operations, it is anticipated that benefiting citizens will bear an appropriate share of the cost of that service. Appropriate shares may also be borne from other income sources to reflect instructional or research values inherent in these activities. In certain particular instances, as with the Ohio Cooperative Extension Service, and the Labor Education and Research Service, the state has determined that the specific public services themselves warrant direct support as carrying out a clear purpose of state policy.

Except as the state may from time to time identify specific public service activities which will carry out a clear state government purpose, thus justifying direct state support, the Board recommends that present policies for funding these activities be continued.

Student Assistance

Colleges and universities administer a variety of funds made available by donors specifically for use in assisting students with the cost of attending classes. The institutions likewise receive and utilize sizable amounts of federal grant and loan funds for these same purposes. College and university trustees may also dedicate some portion of general operating income to student assistance within the internal budgets of their institutions. The State of Ohio has not, however, made funds directly available to colleges and universities for student assistance purposes. Rather, in establishing the Ohio Instructional Grants Program and the War Orphans Scholarship Program, the state has chosen to establish and administer programs of direct assistance to students through the Board of Regents. It also operates a guaranteed student loan program through the Ohio Student Loan Commission.

Except as the state may from time to time identify specific state objectives which can best be served through direct institutional support, the Board recommends that present policies for funding student assistance programs be continued.

Auxiliary Services

Colleges and universities presently operate a wide variety of services in conjunction with campus student life. While important to the overall atmosphere within which students study and learn, these services deal most immediately with the physical needs of students while they are on campus and with various recreational and supporting services. Auxiliary Services include residence and dining halls, student unions, intercollegiate athletics, student health services, parking and bus services, bookstores and so forth, and are generally expected to be supported by direct user-based student charges, by generated income, or by the General Fee charged to all students. In conjunction with the operation of Auxiliary Services, the General Assembly has authorized college and university trustees to undertake short and long-term debt for construction of facilities, and to pledge both the income generated by such facilities and various of the general receipts of the institution, other than state tax appropriations, for the retirement of debt.

As a general policy, the State of Ohio has not made direct state support available to colleges and universities for Auxiliary Services. In recent years, however, in order to assist new institutions in getting underway, the state has in some cases made state funds available for parking facilities, student lounge areas, and food service facilities. But, in providing this aid, the state has not committed itself to assist such programs wherever they may occur.

Except as very special problems dictate otherwise, the Board recommends continuation of policies calling for the support of Auxiliary Services from direct student user charges, from generated income, and from the General fee charged to all students. Increased clarity should be provided in institutional financial practice concerning the income base sustaining Auxiliary Services. A policy of clear and direct relationship between services provided and the student charges identifiable with those services appears to offer a proper market mechanism for determining the appropriate level of indirect and supporting services which should be made available to students within individual colleges and universities.

Plant Additions and Improvements

The physical plants of state colleges and universities have been built primarily by the state and by the income available to Auxiliary Services. The state has generally assumed responsibility for constructing academic and instruction and research-related facilities, while colleges and university trustees have independently financed auxiliary facilities through current income of those services and through long-term debt undertaken as provided by law. In the case of community colleges, major support of academic plant has been borne by local taxes in concert with state appropriations, and in a number of instances local gifts have been important in the financing of initial land purchases and building programs of two-year campuses.

The Board of Regents recommends that the clear separation of responsibility for the financing of academic plant and of auxiliary plant between the state and the boards of trustees be continued. Such separation of responsibility is consistent with the state's concentration of concern upon Instructional and General Operations within the operating appropriations (discussed above), and is consistent with the sizable grant of independent management authority made to boards of trustees under state law. **Emergency measures such as those undertaken by the state to provide an appropriation supplement for debt service costs of Ohio University residence and dining halls should not alter fundamentally the responsibility of boards of trustees independently to manage those Auxiliary Services intended to be self-sustaining through student user charges, generated income, and the General Fee charged to all students.**

Maintaining Financial Strength of Institutions

As portrayed throughout this Plan, the decade of the eighties will be a turbulent period for institutions of higher education, as will be the decade of the nineties. Only a brief respite during the few years before 1980 remains during which general enrollment growth appears likely for many institutions. Enrollment decline from within young age groups, the prospect of dramatic program changes to accommodate larger numbers of older adults and part-time students, uncertain patterns of federal support, new cost pressures associated with inflation, collective bargaining, rising energy costs, and keen competition from other critical social programs for available state government support, promise a harsh financial environment for colleges and universities. While enrollment change will impact in diverse ways on individual institutions and classes of institutions, falling least heavily on the two-year colleges featuring major offerings of technical education and most heavily on the non-urban residential universities, all institutions face dramatic shifts in the student markets which they will serve. Maintaining institutional financial strength and stability during the extended planning period ahead will require careful forward thought and a clear sense of management direction.

General Operating Income and Expenditures

Examination of the income and expenditure patterns of state colleges and universities for the past few years suggests that most of our institutions remain in a sound current condition so far as general operations are concerned, although few have very substantial margins for unexpected developments. Isolated examples of special financial stress are now evident among the state institutions, but only at Ohio University have problems thus far been outside the institutional ability to deal with them.

All of Ohio's colleges and universities have come through very difficult times indeed during the past decade and one-half, and their present stability testifies to resiliency and fundamentally sound management. All have absorbed dramatic growth of enrollments, have weathered storms of campus unrest at the center of major social upheavals of the 1960s and early 1970s, have felt the stress of federal priorities given to and rapidly changed concerning national defense, space exploration, environmental quality, health services expansion, and energy development, have responded to national social problems associated with minority and women's rights and related affirmative action programs, and have dealt with the internal stresses of sharply shifting enrollment demand or decline in individual teaching fields and in some instances with problems associated with collective bargaining.

In spite of these stresses, our institutions stand near the end of the major growth period with greatly improved and modernized physical campuses, up-to-date and well-equipped laboratories and computer facilities, faculty and administrative salary structures improved over the decade and one half as compared with other segments of the work force, fully developed and diverse instructional offerings at all levels, and greatly more sophisticated internal administrative, planning, and budgeting systems than existed at the beginning of the growth period. Clear testimony is given by these facts both of effective performance by our colleges and universities and of dependable and ever-increasing financial support from the state government.

Debt Structures

Preparatory to and throughout the recent period of dramatic growth, individual state universities have incurred substantial amounts of long-term debt. Such debt has been incurred as provided by law for the purpose of expanding physical facilities for residence and dining halls, student unions and recreational facilities, convocation centers, parking facilities, student health service facilities, and a variety of other auxiliary-service purposes. Virtually all of this debt has been undertaken by the state-assisted universities, while the newer two-year campuses have thus far developed little in the way of auxiliary services for largely commuter student bodies, or have had the benefit of local property tax levies for physical plant development.

At the present time, the state-assisted universities in the aggregate have outstanding auxiliary services debt as follows:

Residence and Dining Halls	$213,540,000
Student Unions, Health Services and Recreational Facilities	67,462,000
Parking and other supporting facilities	25,881,000
	$306,883,000

Larger portions of debt have been undertaken by those universities serving large numbers of students within residence and dining hall systems.

Aggregate debt is distributed among individual institutions as follows:

INSTITUTION	TOTAL DEBT	RESIDENCY AND DINING DEBT	NUMBER OF RESIDENCE HALL SPACES
	(MILLIONS)		
University of Akron	$ 13.5	$ 5.8	1,300
Bowling Green State University	45.7*	27.3	8,000
Central State University	4.2	3.5	1,580
University of Cincinnati	41.8	30.3	5,126
Cleveland State University	2.1	-0-	202
Kent State University	50.1	32.9	7,500
Miami University	26.4	18.8	7,350
Ohio State University	50.0**	43.5	10,250
Ohio University	45.7	39.7	8,450
University of Toledo	24.9	10.0	1,534
Wright State University	2.5	1.7	320
Youngstown State University	-0-	-0-	206
	$306.9	$213.5	

*Includes $9.6 million issue scheduled for sale later this year.
**Includes $1.8 million issue scheduled for sale later this year.

Prior to 1969, auxiliary services debt retirement was based upon pledges of income generated by a particular facility or group of facilities and by specific fees which might be assessed by a board of trustees.

In 1969 the General Assembly made possible the financing or refinancing of auxiliary services debt through the pledging of all general receipts of an institution, but specifically excluding income from state appropriations. The Board of Regents has subsequently required as a condition of its approval of new fee pledges within a general receipts pledge that each university give administrative assurance that throughout the pay-out period receipts other than from instructional fees and tuition surcharges will be adequate to service the debt. While not diminishing the legal force of the general receipts pledge, this has been an attempt to avoid erosion of the income base on which the instructional programming of each university rests. **In order to add emphasis to the urgency of protecting instructional income from the encroachments of debt-service needs, assurances within these procedures should in future instances be made by board of trustee action.**

Since 1971, nine institutions have undertaken general receipts borrowing. At the present time the borrowing based on specific income pledges and on general receipts pledges is as follows:

	Amount of Debt
Specific Income Pledges	$ 168.2 million
General Receipts Pledges	137.8 million
	$ 306.9

As was the case with regard to the general operating income and expenditures described above, with a few notable exceptions our state-assisted colleges and universities display a stable income and expenditure picture as regards the servicing of auxiliary services debt, and most have been able to fulfill all associated reserve requirements. A strong word of caution is in order, however, that auxiliary services debt retirement is importantly tied to the ability of each university or college to maintain anticipated enrollment levels throughout the extended planning period, and is especially tied in many cases to the level of full-time student enrollments. **The Board of Regents urges all university boards of trustees to examine closely the implications of possible**

full-time enrollment decline on the debt retirement burdens now borne by their institutions, and to be especially cautious in this regard about the undertaking of new programs of debt. It is meaningful to note that total existing debt varies substantially among our universities in relation to full-time equivalent enrollment. Trustees should also note and be advised by the fact that the relationship between annual debt service requirements and total unrestricted, non-instructional income is markedly different at the several universities, and that overall budget flexibility is importantly limited as annual debt service obligations are allowed to rise.

	Debt per FTE Student	Ratio of Unrestricted Non-Instructional Income to Annual Debt Service Requirements
University of Akron	$ 876	10:1
Bowling Green State University	2,887	10:1
Central State University	2,250	8:1
University of Cincinnati	1,609	27:1
Cleveland State University	168	32:1
Kent State University	2,758	6:1
Miami University	1,710	11:1
Ohio State University	1,056	41:1
Ohio University	3,692	6:1
University of Toledo	1,996	8:1
Wright State University	273	23:1
Youngstown State University	-0-	not applicable

Long-term institutional financial planning is especially urgent in order to anticipate the likely impact of enrollment instability and to prepare for such developments through maintenance of appropriate operating reserves, the administration of necessary cost control procedures, and the devising of appropriate enrollment marketing strategies. The largely residential institutions, in particular, being most likely to experience enrollment loss of the young students who populate dormitory systems, should not assume that they will somehow be immune from the effects of general decline in the young student pools.

Policy Implications of the Planning Period

The nature of the planning period ahead suggests a variety of implications for individual state-assisted institutions, especially those for whom full-time enrollment decline or dramatic overall enrollment change are anticipated, and for the state government as well.

For Institutions

1. **Strong and determined institutional management during a decade or two of enrollment change and of financial stress may be the key to the survival of institutional independence.** It seems unlikely that the independence of boards of trustees can be defended if the state must frequently intervene to shore-up unstable financial structures of individual universities and colleges. Recent experience at Ohio University has taught that in instances of extreme institutional stress, especially as regards the handling of major indebtedness, institutional crisis is indeed closely allied to public perceptions of the stability of the state itself, and the state can ill afford to leave financially troubled institutions outside its direct control.

2. **The establishment of internal budgeting mechanisms which assure flexibility to reflect changing program priorities and to provide for new program development and innovation in instructional services and in administration will be critical to institutional stability in a changing market for higher education services.** Sound advice on institutional budgeting processes continues to be available through recommendations of the now completed Management Improvement Program.

3. **The maintenance of effective mechanisms of cost control which will draw continuing attention to minimizing costs associated with achieving institutional goals should receive a high priority within university and college management.**

4. **As a fundamental investment in short-term, year to year institutional stability, looking to an extended period of substantial financial stress, individual institutions should carefully study and the General Assembly should consider requiring the accumulating and sustaining of an unbudgeted operating reserve of an appropriate size, but equaling at least five percent of total annual operating expenditures.** Trustee release of such reserves should be only for emergency purposes, and replenishment of the fund following its emergency use should be promptly assured.

5. **Careful attention should be given to defending the revenue base available for instructional purposes against erosion resulting from support of non-educational functions ordinarily expected to be self-sustaining or to rely upon the General Fees paid by students.** Proper caution in this regard can be expressed by setting the General Fee at a level fully reflecting the costs of auxiliary services not otherwise sustained by generated income and direct user charges, by avoiding further expansion of non-educational services beyond what the General Fee can be openly acknowledged to bear, by avoiding the extension of auxiliary services debt undertakings, and by avoiding the commitment, through general receipts pledges for debt retirement, of income sources otherwise available for support of instructional programs.

6. **New and imaginative thought should be given to devising methods for forecasting longer-term institutional financial crisis, and careful attention given to devising strategies for responding to substantial enrollment change.** Such forecasting of financial crisis should include a plotting of enrollment by major category of students, the occupancy and use levels of housing and student services facilities, and the varied impacts on institutional revenue of enrollment instability and change. No institution, either residential or commuter in character, can avoid the impact of declines following 1980 in young student pools and the likely attendant increases in part time and older students. Instructional programming and many internal financial structures will be importantly altered by these major changes in higher education's market.

7. **Continued emphasis should be placed on preserving institutional freedom to manage various funds independent of external controls, in order that maximum flexibility of administration is possible.**

For the State

1. **Institutional flexibility should be strongly supported by continuing the present freedom for institutions to budget internally once the total amount of state support has been determined.**

2. **The state should continue to update each year the expenditure models through which state appropriations are determined, to properly reflect cost pressures of inflation, changing patterns of program cost, enrollment growth, and the appropriate sharing of instructional costs between the state and enrolled students.**

3. **Care should be taken in relating appropriations to the costs associated with legislative decisions other than those provided for within the expenditure models.** The prime example of recent failure to meet this standard is the cost associated with mandatory civil service pay changes, which on several recent occasions have been only partially funded by the legislature.

4. **Institutional flexibility should be supported by assuring continued college or university independence in setting general fees, room and board charges, and special fees and charges, and in developing and administering privately generated funds aimed at enhancing institutional quality.**

5. **Institutional flexibility should be defended by continued college or university independence in the areas of personnel management, program evaluation, capital facilities planning, and financial and managerial control of institutional operations.**

Operating Budgets

Over a number of years the Board of Regents and the state colleges and universities have developed a generalized process for recommending needed state support for operating purposes, which centers upon construction of a series of standard expenditure models. Each model reflects a weighted average of total expenditure requirements experienced by individual institutions in serving students within a given instructional program area and at a given level of teaching. Every instructional activity within our state system of colleges and universities is placed within one or another of these expenditure models for purposes of budget determination. Thus, for example, all of the lower-division undergraduate courses which have general education as their primary purpose will be classified in a "General Studies" model, with the varying cost characteristics of different teaching fields such as history, sociology, art, and biology within that model represented by several cost levels (cost level 1, cost level 2, cost level 3), according to actual past experiences. Similarly, courses generally categorized within Technical Education Programs, Baccalaureate Programs, Masters - Professional Programs, Doctoral Programs and Medical Programs, will be grouped according to the particular cost characteristics demonstrated in past institutional experience for each such category.

Within these models, representative cost characteristics concerning faculty resources are arranged which represent actual conditions found within the various colleges and universities, as follows:

	Cost Level	Students/Faculty Ratio (FTE)	Student Credit Hours per Faculty	Average Annual Compensation (all ranks)
General Studies	1	36/1	540	$ 16,310
	2	23/1	345	14,650
	3	24/1	360	18,240
Technical Educ.	1	15/1	225	12,930
	2	12/1	180	12,950
	3	10/1	150	15,410
Baccalaureate	1	20/1	300	18,720
	2	14/1	210	17,140
	3	11/1	165	19,870
Masters - Prof.	1	14/1	210	21,920
	2	7/1	105	22,050
	3	6/1	90	24,540
Doctoral	1	8/1	120	24,300
	2	5/1	75	27,400
Medical	1	6.5/1	98	19,330
	2	4.5/1	67	25,500

Appropriate elements of supporting costs are then added to each model, based upon actual experience of the various colleges and universities, for other expenses within Departmental Instruction (clerical support and supplies and equipment), Academic Support (libraries, audio-visual services, instructional computers), Student Services (admissions, registration, counseling, placement), Institutional Support (general administration, security, communications, publications), and Plant Operations (utilities, building maintenance, grounds upkeep).

Based upon continuous restudy of actual operating costs within all state colleges and universities, and based upon a periodic inter-institutional consultation about necessary support increases within each subsequent budgeting period, the Board of Regents is able, using these standard expenditure models and appropriate enrollment projections, to recommend to the General Assembly necessary operating budget support for all instructional activity within the system of institutions. In the presentation of each expenditure model to the General Assembly, the Board is able also to highlight the decisions which must be made about the relative levels at which student instructional fees should stand as contrasted with levels of state subsidy support.

The Board recommends that this generalized process for determining needed student-based appropriation support be continued, and that stress continue to be placed upon ongoing inter-institutional consultation during successive budget periods.

Careful continuing attention should be given to monitoring the relationships between existing student-based methods for determining state appropriation support and the changing enrollment patterns of state-assisted colleges and universities. While concern is in order about the utility of enrollment-derived formulas during times of enrollment stability or decline, great caution should be exercised in any movement away from the principle of equity in distributing state funds on the basis of students actually served by individual institutions within the state system.

Progress made during the 1975-77 biennium to better define inflationary cost pressures through development of a University Price Index should be continued, and the Index should be updated regularly in future standard expenditure models.

In order that legislative attention might clearly be focused each biennium on the total needs of instructional programs and on the necessity of making decisions concerning both state subsidy support and related student fee levels in fully funding the standard expenditure models, it is strongly urged that the maximum instructional fee be limited by the General Assembly each budget session as an integral part of the appropriation process. Gaining institutional freedom to set this particular fee is a hollow victory if it results in decreased legislative concern for fully providing needed operating support, from whatever source needed, and for the critical relationship between fee levels and the achievement of uniform access to and acceptable quality levels within higher education for all Ohio citizens.

It must be recognized, however, that some flexibility is needed to meet unforeseen circumstances. While each two-year appropriation assures institutions stable funding for the biennium, there may be unanticipated cost increases that cannot be met with available resources. These additional costs would present a particularly serious problem if fees are limited by legislative action. **Therefore, it is also recommended that in establishing limitations on the instructional fee, the General Assembly provide the Board of Regents with limited discretionary authority to adjust the ceilings in the event of unavoidable cost increases due to governmental action or the failure of the state to fund fully its support appropriations.**

Finally, because of the difficulty of precise enrollment forecasting and the unequal proportional impact of incorrect forecasts upon institutions exhibiting different growth rates, some flexibility should be provided by the General Assembly by which the Board of Regents can make equitable redistribution of available unearned appropriations after actual enrollments are known. Additionally, provision should be made for partially delaying the loss of subsidy resulting from enrollment decline, in order to allow time during which affected institutions can reduce spending in an orderly manner.

Financial Needs of the Planning Period

The financial pressures on higher education are already heavy and will increase in the immediate future. Our colleges and universities will have to cope with continued inflation, enrollment growth at least until 1980 (especially on the two-year campuses), and costs associated with energy needs, possible collective bargaining arrangements, and health, safety and affirmative action programs. They are also likely to face added financial pressure resulting from externally mandated changes such as civil service pay adjustments and the required redesign of teacher education programs.

Increased operating support from the state will be needed simply to fund higher education's basic programs and meet the rising costs associated with instruction and general operations. Beyond this, implementation of Master Plan recommendations in the areas of access, lifelong learning, quality improvement, health personnel education, and coordination and planning would require a very significant increase in state subsidy support. The Board of Regents recognizes that it is unlikely all of these recommendations could be funded at one time. In preparing budget proposals for the system, the Board will present its estimates of the costs of initiating each program at a beginning level and also consider the important element of timing in introducing proposals for change. Obviously, the timetable for and degree of implementation in these areas will depend on the level of the state's total resources and on their allocation, a process which must weigh the needs of higher education against the needs of other public programs. Priorities must be set and this can be done effectively only within the ongoing processes of the state's budgetary system.

Capital Improvement Budgets

Capital improvement needs must also be considered in evaluating the future financing of higher education. The Board of Regents and the state-assisted colleges and universities have over several years continued to refine procedures for planning and carrying out needed construction, renovation, and improvement of academic and instruction-related buildings and associated utilities and grounds. Space planning standards issued by the Board of Regents and developed through an inter-institutional study committee are in use, providing uniform guidelines for determining needed spaces for various instructional and related functions. Study has been given and continues of ways in which construction procedures can be simplified while at the same time assuring construction of well-planned and economical structures. Efforts to expedite current building projects should be diligently continued.

With full-time enrollments expected to reach a peak in about 1980 and to stabilize or decline throughout the decade to follow, capital improvements associated with anticipated growth should generally be undertaken with great caution. Only in those circumstances where enrollment growth prospects can be clearly and persuasively defended should such construction be undertaken. Even in such cases of demonstrated need, alternatives looking to cooperative use of existing space available in other public or privately-sponsored institutions or available on a rental basis from commercial sources should be fully explored before new commitments for plant expansions are made. Such alternatives may assure service where enrollments increase somewhat immediately prior to the onset of declines following 1980.

Without overlooking the likelihood that significant growth will yet occur, principally based on part-time enrollment and principally at the urban universities and the two-year campuses, primary emphasis should be placed in future capital plans upon the renovation and selective replacement of existing obsolete facilities, the support of development at the new health personnel education centers, the provision of very carefully selected special purpose facilities which may be needed at existing campuses for adequate service to present student bodies, the provision of energy conservation controls and other needed utilities improvements, and improvement of conditions which constitute safety hazards or barriers to handicapped persons. In all such planning, however, especially that regarding renovation and replacement of obsolete plant, the continued need for such space should be carefully studied on the basis of enrollment expectations during the eighties and the nineties. **The growing obsolescence of individual buildings should be seen as an opportunity for reducing total plant resources and for consolidating functions within existing plant if enrollment changes will shortly modify an institution's need for particular categories of spaces.**

Not only does the prospect of enrollment stability or decline following 1980 give cause for added caution in further capital improvements spending, but the growing burden which debt service represents within the state-funded higher education budget is an added cause for concern. The present arrangement for funding academic and instruction-related physical facilities is through bonds issued for this purpose by the Public Facilities Commission. Since this method of funding was initiated in 1968, a total of $800 million in college and university construction and improvements has been approved by the General Assembly, and the Public Facilities Commission has thus far issued bonds totaling $480 million for projects progressing to the point of requiring cash payments to contractors. These bonds are retired and the required interest is paid from direct legislative appropriations made as a part of the biennial appropriation for higher education. Total appropriations for this purpose have risen during the current biennium to $79.1 million. During the seven years since debt service payments began under this bonding arrangement, the proportion of total higher education appropriations required for such payments has risen as follows:

	Percent of Higher Education Appropriation
1970-71	1.07
1971-72	2.62
1972-73	4.82
1973-74	5.28
1974-75	6.76
1975-76	6.75
1976-77	9.00

Capital appropriations already made by the General Assembly will require the biennial debt service appropriation to rise from the present $79 million to about $117 million in the next biennium, with the appropriation levelling off to about $114 million by the time all presently approved projects are completed. Any capital appropriations made for the 1977-79 biennium and for future biennia will add further to this required level of debt service appropriation. **The Board of Regents strongly recommends that the increased encroachment**

of debt service demands upon higher education operating appropriations be halted, and that future capital appropriations from this funding arrangement be limited to a level that can be financed from a particular fraction of new state funding available in a given budget period. It is suggested that a limit of five percent of overall increases provided within the higher education appropriation be an appropriate level for maintenance of a proper improvements program for the existing system of institutions. Careful study of this matter will be required, however, in the context of each biennial budget consideration to assure that a responsible updating of the overall physical plant is achieved within the constraints of available state support.

State Financing of Higher Education

The section on Financial Needs of the Planning Period stressed the crucial relationship between the funding needs of higher education and the level and allocation of state resources. The ability of our colleges and universities to sustain existing commitments and to move in the new directions set forth in this Master Plan will depend, in large measure, on the state's ability to provide increased support.

That ability will turn both upon likely growth within existing state revenue sources, including changes which might be made in the revenue base, and upon the competitive demands of other state programs. At this point, no definitive judgment is possible in either area, so it is extremely difficult to evaluate the state's capacity to respond fully to higher education's need for increased appropriations. But what evidence is available suggests that a considerable problem remains to be solved in connection with the funding of our colleges and universities.

This problem will be addressed through the budgetary processes. **In this procedure, every effort should be made to clarify for the Governor and members of the General Assembly the issues which compel higher education to move in new directions during the years just ahead, and to stress the urgency as well of existing programs and service commitments being adequately sustained. Emphasis must also be placed on the need to maintain higher education's percentage share of total available state appropriations, which, over the past several years, has held rather consistently at 14 to 15 percent.** In these matters, the Board will work closely with state budget officials and with legislative committees through established budget processes of formulation and review.

Priorities within Funding Constraints

If, in spite of strong efforts to gain support, it is necessary to operate the higher educational program within a lower level of state funding than is implied herein, thoughtful attention must be given to relative priorities among desirable activities.

In this regard, the Board of Regents strongly urges that past inclinations in the budgeting review process to reject out of hand all new program proposals in the interest of guaranteeing continued support for all existing program and service commitments be resisted as out of keeping with sound planning for the future. Various proposals discussed throughout this Plan, those regarding improved access to higher education, those regarding urgent steps to expand service to additional part-time and older adult students, those regarding modest dedication of support for the innovation closely associated with quality improvement, and essential provisions for new commitments in health-related education, must not be set aside if Ohio's system of higher education is to gather strength for two decades of dramatic change. Positive beginnings of progress in each area are essential during the several years just ahead and should be stoutly defended within such funding constraints as may prevail.

At the same time, in dealing with possible funding constraints, state colleges and universities must also continue to recognize the crucial need to keep student fees as low as possible to promote access to higher education. This need must rank high on the list of priorities considered in response to any future funding problems.

Alternatives of Self-Help

In the careful study of alternatives to full funding for Ohio's higher education system, attention should focus clearly as well on actions which may need to be considered or should be actively pursued by individual institutions as acts of self-help.

1. Strong institutional follow-up on recommendations arising from the recent Management Improvement Program should be a continuing administrative objective of every state-assisted college or university. Special attention in this regard should be given to developing internal budgeting systems which clearly identify and systematically re-examine the costs of individual academic programs. There should in this manner be continually brought before all participants in internal budgeting the opportunity to understand and to question the relative values placed on institutional goals and objectives as these are expressed in the resource commitments of developing budgets.
2. In addition to such general cost control mechanisms as are already in place and producing reductions of avoidable spending, each college and university is urged regularly to review all degree programs to assure achievement of the intended goals of each program, the reasonableness of costs, the adequacy of student interest in and use of individual programs, and the continued value of each program within the institution's changing sense of mission. It is recommended that twenty percent of all degree programs be systematically evaluated each year, resulting in a cycle of careful restudy not extending beyond a five-year period. A report of each such annual evaluation should be available to the Board of Regents for use in a biennial stewardship report to the General Assembly accompanying the higher education appropriation requests.
3. Careful study of and caution concerning the undertaking of new locally financed capital construction is in order as a means of avoiding erosion of income otherwise available for instructional purposes. By the same token, caution concerning the undertaking of any but essential state-financed capital improvements will halt the erosion of available state appropriations through increasing debt service obligations.
4. Selected limitation of access to the especially high-cost medical and other health-professional programs beyond reasonable needs of the society can diminish somewhat the very large investments now having to be made in these expanded professional programs.
5. Increased study may also be in order concerning the proper level of fees for especially high-cost professional programs, and attention should be directed toward influencing new federal policies of support for the health professions.
6. Careful attention should be given by individual colleges and universities to the income-generating possibilities and the likely impact on enrollments of student fee increases for all students, against the possibility that constraints on state funding may require general increases in fee levels in the years just ahead.
7. While contrary to the hopes of increased access set out in this Plan, individual colleges and universities should give careful thought to the likely short-term advantages and disadvantages of limiting enrollment to levels of available state funding. Careful thought in this regard should go also, however, to the longer-run impact of limiting enrollments upon the institutions' continued attraction of students.
8. Individual state-assisted colleges and universities should continue to explore and to nurture support from non-governmental sources. Special attention in this area should be directed to attracting support for program redirection and innovation in both administrative and instructional activities, as contrasted with support for capital improvements and for student assistance, except as private gifts for construction can substitute for new debt undertakings for essential buildings.

The decades of the eighties and of the nineties, following the brief period of enrollment growth yet remaining before 1980, will call for skillful institutional management and carefully devised policies for state government support of that management. **In order that continuing and systematic attention might be focused on the future enrollment characteristics described in Chapter II of this Plan, and upon the very clear relationships between those enrollment characteristics and the fundamental program and institutional management changes required for the planning period ahead, an on-going Planning Council should be established to serve in an advisory capacity to the Board of Regents and to the colleges and universities in Ohio. This Council, drawn from within the corps of academic and general administrative leaders of Ohio's colleges and universities, should have as its charge the continuous focusing of attention upon major planning issues set out in this Plan, as those issues continue to define the general shape of events for the decade or two decades ahead.**

CHAPTER XI
The Continuing Agenda: Other Issues

This Master Plan sets forth a continuing agenda for higher education in Ohio. It addresses many of the major issues that will challenge our system of colleges and universities in the years ahead, responding to those issues with objectives and recommendations that are designed to strengthen our higher education system.

In the preceding chapters and chapter summaries these issues, objectives, and recommendations are discussed in depth. But there are also some other matters pertinent to the future of higher education which must be considered as parts of the continuing agenda. These issues are dealt with briefly in this concluding chapter.

The possibility of faculty collective bargaining is one of the most important matters facing higher education. Consideration of this major change must take into account the many ramifications it holds for our colleges and universities, including its relationship to institutional autonomy and academic freedom. These factors must be thoroughly evaluated in shaping state policy toward faculty collective bargaining. The Board of Regents plans a careful study of this issue and will follow-up with recommendations to the General Assembly.

Similar studies are also needed to assure effective planning in some areas of postsecondary education not discussed at length in this Plan. The proprietary (for profit) sector is one where limited knowledge militates against making specific recommendations at this time. There is a need for much greater understanding of the proprietary schools' role and their place in the overall education structure. In its capacity as the state's 1202 Commission, the Board plans a thorough evaluation of this sector as the first step toward recommending public policies dealing with proprietary schools.

Occupational education is another area requiring study. In the Board's view, the most pressing need at this time is to establish better coordination between the Division of Vocational Education and the Board of Regents, so that adult occupational education can become an integral part of the planning process. Efforts must also be made to relate occupational programs offered by the CETA agencies to overall planning. The Board will actively pursue both objectives as part of its continuing agenda.

The problem posed by the inadequate preparation of students entering our colleges and universities has been cited in the Master Plan, along with recommendations for campus-level actions to deal with it. But the responsibility for resolving this problem cannot be borne by higher education alone. There is a need to develop a much closer working relationship with the Ohio Department of Education so that a long-term solution can be developed through cooperative efforts.

In this connection, the redesign of teacher-education programs remains a continuing agenda item of great importance. Already underway, this effort involves the upgrading of practical experience, control over teacher education by the practicing professionals, and the implication of clearly structured student-faculty ratio requirements. This redesign program will continue to influence the shape and cost of teacher education in the years ahead and must figure prominently in future planning.

Increased cooperation among higher education institutions is another agenda goal. This is particularly important in the area of research where, in several fields, activities can achieve significant benefits for Ohio. The universities and the Board of Regents are already cooperating in the vital field of energy research and cooperative efforts in health research are evolving out of some of the regional health programs. These activities should be expanded and efforts made to identify other opportunities for cooperation. One of the advantages of this approach is the potential it holds for attracting outside research funding to support university activity and help meet the needs of the state.

This Master Plan has not sought to discuss all matters of importance to higher education. Instead, its aim has been to identify and focus principal attention on a number of fundamental issues of overriding significance to which state-level policy attention must be drawn in the years ahead. Many other matters of importance are left to the continuing effective efforts of our individual colleges and universities.

Nor can a master plan anticipate all of the issues that will affect higher education in future years. Our society is characterized by rapid change, and this continuing process is certain to produce other challenges for our colleges and universities. Needs may arise in areas such as Health Education and Law, as well as in other professional fields, that will require new types of services. The relationship between the state and independent campuses will demand continuing attention, as will future developments related to the financing of higher education. The Board of Regents, working closely with individual institutions, will be alert to all such evolving issues, responding to them with careful study and planning.

In concluding this Master Plan, it is important to emphasize again that it sets forth a *continuing agenda*. As such, it is not a static document, but one important element in the ongoing planning process.

Now that this agenda has been set, the task of working through it must begin.

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College Enrollment: A Quick Look at Ohio and Ohio Students, 1974

Report of the Advisory Committee on Student Financial Aid, 1975

Services for Physically Handicapped Students, 1976

Copies of these publications and of the 1976 Master Plan are available from the Ohio Board of Regents, 30 East Broad Street, Columbus, Ohio, 43215. Telephone: (614) 466-6000.